

Table 2.0-1. List of LWG Field Sampling Events.

Study/Task Description	Task Round	Year	Reference		Data Use		
			FSR or Equivalent	Data Report or SCSR	RI	BERA	BHHRA
Physical Systems Investigations							
Sediment trend analysis (STA) survey	Pre-RI	2001	GeoSea Consulting 2001; SEA 2002a	NA		x	
Sediment profile imaging (SPI) survey	Pre-RI	2001	SEA 2002b	NA		x	
Multibeam bathymetric survey - Winter 2002	Pre-RI	2001-2002	DEA 2002a	NA		x	
Multibeam bathymetric survey - Summer 2002	1	2002	DEA 2003a	NA		x	
Multibeam bathymetric survey - May 2003	1	2003	SEA and DEA 2003; DEA 2003b	NA		x	
Multibeam bathymetric survey - February 2004	1	2004	Integral and DEA 2004; DEA 2004a	NA		x	
Multibeam bathymetric survey -February 2007	3A	2007	NA	Integral 2007h		x	
Multibeam bathymetric survey - January 2009	3	2009	DEA 2009	NA		x	
Nearshore deposition/erosion monitoring using sediment stakes	1	2002-2004	Anchor 2004a	NA			
Acoustic doppler current profiler (ADCP) survey - April 2002	Pre-RI	2002	DEA 2002b	Integral 2004a		x	
ADCP survey - May 2003	1	2003	DEA 2003c	Integral 2004a		x	
ADCP survey - January 2004	1	2004	DEA 2004b	Integral 2004a		x	
Hydrodynamic/sediment transport modeling	2	2005-2006	Integral 2006e	Integral et al. 2007		x	
Cultural resources analysis	2	2005	AINW 2005	NA		x	
Side-scan sonar	3	2008	NA	Anchor QEA 2009		x	
Sediment Investigations							
Composite beach sediment and collocated surface sediment	1	2002	SEA et al. 2003	Integral 2004a	x	x	x
Shorebird foraging area and beach sediment chemistry	2A	2004	Integral 2005a	Integral 2005s, 2006a, 2008a	x	x	x
Surface sediment chemistry	2A	2004	Integral 2005a	Integral 2005s, 2006a, 2008a	x	x	x
Subsurface sediment chemistry	2A	2004	Integral and Anchor 2005	Integral 2005s, 2006b, 2008a	x	x	x
Benthic sediment toxicity (bioassays)	2A	2004	Integral 2005a	Windward 2005a		x	x
Natural attenuation (radioisotope cores)	2A	2004	Anchor 2005a; Integral and Anchor 2005	Anchor 2005b	x		
Sediment cores	2B	2005	Integral 2005b	Integral 2006c, 2008a	x	x	x
Groundwater pathway collocated sediment grabs	2B	2005	Integral 2006f	Integral 2006g	x	x	x
Benthic invertebrate collocated sediment chemistry and bioaccumulation	2B	2005	Windward and Integral 2006	Integral and Windward 2006b	x	x	x
Upstream/downstream surface and subsurface sediment samples	3	2007	Integral 2007f	Integral 2007g	x	x	x
Natural attenuation (radioisotope subsurface sediment cores)	3A	2007	Integral 2007f	Integral 2007h	x		
Sediment (Willamette Cove)	3B	2007	NA	Integral 2008d	x	x	x
Biota - collocated sediments	3B	2007	Integral and Windward 2008	Integral 2008b,c	x	x	x
Sediment and sediment toxicity bioassay testing	3B	2007-2008	Integral 2008f	Integral 2008e, Windward 2008b	x	x	
Sediment chemical mobility testing	3B	2008	Anchor and Integral 2008c	Integral 2009	x		
Tissue Investigations							
Juvenile salmonid residence time survey	Pre-RI	2001	Ellis Ecological Services 2002	NA		x	
Juvenile salmonid mark/recapture pilot study	1	2002	SEA et al. 2003	Integral 2004b	x		
Aquatic plant and amphibian/reptile reconnaissance survey	1	2002	NA	Windward 2003a	x		

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Adult lamprey harvest reconnaissance survey	1	2002	Kennedy/Jenks 2003	NA	x		
Juvenile lamprey and benthic infaunal biomass reconnaissance survey	1	2002	SEA and Windward 2003	NA	x		
Epibenthic invertebrate sampling using multiplates	1A	2002	Windward 2003b	Integral 2004a	x		
Collection of fish tissue for chemical analysis	1A	2002	SEA et al. 2003	Integral 2004a	x	x	x
Benthic infauna and clam sampling	1	2002	SEA et al. 2003	Integral 2004a	x	x	x
Sub-yearling Chinook tissue	2A	2005	Integral and Windward 2005a	Integral and Windward 2006a	x	x	
Multiplate epibenthic invertebrate tissue	2A	2005	Windward 2005b	Integral 2006h	x		
Benthic invertebrates and clam tissue	2	2005	Windward and Integral 2005a, Windward and Integral 2006	Integral and Windward 2006b	x	x	
Mussel and lamprey ammocoete tissue	2B	2005	Windward and Integral 2006	Windward and Integral 2007	x	x	
Lamprey ammocoete tissue	3	2006	Windward 2006a	Integral and Windward 2007a, Windward 2007a, 2008a	x	x	
Sturgeon tissue	3A	2007	Windward 2007b	Windward and Integral 2008	x	x	x
Fish and invertebrate tissue with collocated sediment	3B	2007	Integral and Windward 2008	Integral 2008b,c	x	x	x
Surface Water Investigations							
Surface water reconnaissance survey	2A	2004	Integral 2005c	NA	x		
Surface water event 1 - Fall 2004	2A	2004	Integral 2005c	Integral 2006d	x	x	x
Surface water event 1 - Fall 2004 (XAD column)	2A	2004	Integral 2005c	Integral 2006d	x	x	x
Surface water event 1 - Fall 2004 (XAD filter)	2A	2004	Integral 2005c	Integral 2006d	x	x	x
Surface water event 2 - Winter 2005	2A	2005	Integral 2005d	Integral 2006d	x	x	x
Surface water event 2 - Winter 2005 (XAD column)	2A	2005	Integral 2005d	Integral 2006d	x	x	x
Surface water event 2 - Winter 2005 (XAD filter)	2A	2005	Integral 2005d	Integral 2006d	x	x	x
Surface water event 3 - Summer 2005	2A	2005	Integral 2005e	Integral 2006d	x	x	x
Surface water event 3 - Summer 2005 (XAD column)	2A	2005	Integral 2005e	Integral 2006d	x	x	x
Surface water event 3 - Summer 2005 (XAD filter)	2A	2005	Integral 2005e	Integral 2006d	x	x	x
Surface water January 2006 - high flow event	3	2006	Integral 200k	Integral 2006l	x	x	x
Surface water January 2006 - high flow event (XAD column)	3	2006	Integral 200k	Integral 2006l	x	x	x
Surface water January 2006 - high flow event (XAD filter)	3	2006	Integral 200k	Integral 2006l	x	x	x
Surface water September 2006 - low flow event	3	2006	Integral 2006m	Integral 2007a	x	x	x
Surface water September 2006 - low flow event (XAD column)	3	2006	Integral 2006m	Integral 2007a	x	x	x
Surface water September 2006 - low flow event (XAD filter)	3	2006	Integral 2006m	Integral 2007a	x	x	x
Surface water November 2006 - stormwater event	3	2006	Integral 2007b	Integral 2007a	x	x	x
Surface water November 2006 - stormwater event (XAD column)	3	2006	Integral 2007b	Integral 2007a	x	x	x
Surface water November 2006 - stormwater event (XAD filter)	3	2006	Integral 2007b	Integral 2007a	x	x	x
Surface water Winter 2007 - high flow event	3	2007	Integral 2007c	Integral 2007d	x	x	x
Surface water Winter 2007 - high flow event (XAD column)	3	2007	Integral 2007c	Integral 2007d	x	x	x
Surface water Winter 2007 - high flow event (XAD filter)	3	2007	Integral 2007c	Integral 2007d	x	x	x
Groundwater Investigations							
Seep reconnaissance survey	1	2002	GSI 2003a	NA	x		
Groundwater pilot study – mapping tools and sampling methods	2A	2004-2005	NA	Integral 2005f (Appendix B)	x	x	x
Groundwater pathway assessment transition zone water	2A	2005	Integral 2006f	Integral 2006g	x	x	x
Groundwater - Gunderson site	3	2007	Integral 2007e	NA	x		
Stormwater Investigations							
Stormwater outfalls (March 2007 storm event)	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		

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Stormwater outfalls (April 2007 storm event I)	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (April 2007 storm event II)	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (April 2007 storm event III)	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (May 2007 storm event I)	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (May 2007 storm event II) - grab samples	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (June 2007 storm event I) - grab samples	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (June 2007 storm event II)	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
Stormwater outfalls (November 2007 storm event)	3B	2007	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (November 2007 storm event)	3B	2007	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (November 2007 storm event)	3B	2007	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (January 09, 2008 storm event)	3B	2008	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (January 11, 2008 storm event)	3B	2008	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (January 15, 2008 storm event)	3B	2008	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (January 28, 2008 storm event)	3B	2008	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Stormwater outfalls (January 30, 2008 storm event)	3B	2008	Anchor and Integral 2008b; Ash Creek Associates/ Newfields 2008	Anchor and Integral 2008a	x		
Sediment Trap Investigations							
Stormwater outfalls - sediment traps	3A	2007	Anchor and Integral 2007a	Anchor and Integral 2008a	x		
In-river sediment trap event 1	3	2007	Anchor 2007a	Anchor and Integral 2008c	x		
In-river sediment trap event 2	3	2007	Anchor 2007b	Anchor and Integral 2008c	x		
In-river sediment trap event 3	3	2007	Anchor 2007c	Anchor and Integral 2008c	x		
In-river sediment trap event 4	3	2007	Anchor 2008a	Anchor and Integral 2008c	x		
Stormwater outfalls - sediment traps	3B	2007-2008	Anchor and Integral 2008b	Anchor and Integral 2008a	x		

Notes:

BERA - baseline ecological risk assessment

BHHRA - baseline human health risk assessment

FSR - field sampling report

LWG - Lower Willamette Group

NA - not applicable

RI - remedial investigation

SCSR - site characterization summary report

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Survey ID	Data Use			River Mile(s)	Year	Number of Samples	Sample Interval Top (cm)	Sample Interval Bottom (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
		RI	BERA	BHHRA									
Sediments													
PGE Willamette River Sediment Investigation (RM 13.1-13.5) (URS 2010)	WLLGEC10	X			13-13.5	2010	38	0	182.9	Y (some)	N	N	Category 1 QA2
2009 Conoco Philips Pre-dredge Characterization (AMEC 2010a)	WLCPWL09	X			7.7	2009	14	0	350.5	Y (some)	N	N	Category 1 QA1
Sediment Characterization Report: Portland Ship Repair Yard (ERM-West 2009)	WLCPSK09	X			8-8.2	2009	14	0	382.2	Y	N	N	Category 1 QA2
RM 11E Focused Sediment Characterization – Bank Soil and Debris (GSI 2010a)	RM11E_BD	X			11.1-11.5	2009	22	0	25	N	N	N	Category 1 QA2
Arkema Draft Removal Action Area Characterization Report (Integral and Arcadis 2010)	C167-1103	X			7-7.4	2009	352	0	49.2	N	N	N	Category 1 QA2
Sediment Investigation Report Portland Gas Manufacturing Site (Anchor QEA 2009b)	WLLPGH09	X			12-12.3	2009	70	0	450	Y (some)	N	N	Category 1 QA2
RM11E sediment data (GSI 2009a)	RM11E	X	X		11-12	2009	199	0	436	N	N	N	Category 1 QA2
Willamette River FNC Post Office Bar Reach (RM2.2) Sediment Quality Evaluation (USACE 2009)	WLCPOB02	X			2.2-2.4	2009	12	0	182.9	N	Y (some)	Y (some)	Category 1 QA1; grainsize Category 2
T4 Abatement Phase 1 - Construction Phase 1 - Dredging and Capping (Anchor QEA 2009c)	WLCT4L08	X	X	X	4.6	2008	18	0	18.29	N	N	N	Category 1 QA2
2009 Interim Construction Report, Revetment SCM at BP Terminal 22T (URS 2009)	WLCARI08	X			4.8-4.9	2008	14	60.96	243.4	Y (some)	N	N	Category 1 QA1
Chevron Willbridge Terminal 2008/2009 Pre-Dredge Sed. Investigations (Arcadis 2009)	WLCCWI08	X			7.6-7.7	2008-2009	33	0	213.4	N	N	Y	Category 1 QA1
Northwest Pipe & Casing, International Terminals Slip Sed Data 2009 (CH2M Hill 2009)	WLCITG08	X			3.7	2008	24	0	259.1	Y (some)	N	N	Category 1 QA2
Downtown Portland Sediment Characterization Phase II Report (GSI and Hart Crowser 2010)	WLLASB10	X			12.1-15.1	2008-2010	59	0	370	N	N	N	Category 1 QA2
Downtown Portland Sediment Characterization Field and Data Report (GSI 2009b)	WLLASE08	X			12 - 16	2008	81 surface sediment, 36 subsurface	0	378	Y (some)	Y	N	Category 1 QA2
US Moorings, Portland, OR: RI 2008 Sediment Sampling (KTA/TEC 2010)	WLCMRD08	X			5.8-6.1	2008	56	0	609.6	N	N	N	Category 1 QA2
Memo: Zidell Sediment Data Qualifiers. Maul Foster Alongi, 5/2009 (MFA 2009)	WLCZDI07	X			13.5-14	2007	39	0	15	N	N	N	Category 1 QA1, grainsize Category 2
Sediment Data Report, Ash Grove Cement Company, Portland, OR (Parson Brinckerhoff 2005)	WLCACF05	X			2.8	2005	2	0	165	N	N	N	Category 1 QA1

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		RI	BERA	BHHRA									
Post-Dredge Char., Glacier Northwest Cement Term., Portland, OR (Anchor 2004b)	WLCGWI04	X			11.1-11.3	2004	4	0	10	Y	Y (some)	N	Category 1 QA1
USEPA's PBDE data in LWG Sediment Grab Samples	B01-01-48B_SG, B01-01-59B_UD, B01-01-67B_ColocSed, B01-01-68B_SG	X	X	X	1.2-23.2	2004-2007	100	0	30	N	N	N	Category 1 QA2
Dredge Characterization, Glacier Northwest Cement Term., Portland, OR (Anchor 2003)	WLCGWF03	X			11.2-11.3	2003	6	0	88.39	N	Y (some)	N	Category 1 QA1
Post-dredge sampling of Willamette River bottom at CLD Pacific Grain ^a (CLD 2002)	WLCPGH02	X			11.5	2002	1	0	30.48	Y (some)	Y (some)	N	Category 1 QA1
Pre-Dredge Sediment Sampling Goldendale Aluminum Company, Portland, OR (CH2M Hill 1999)	WLCGAB99	X			10.1	1999	2	0	10	N	Y	Y	Category 1 QA1
Gasco EE/CA (Anchor 2006d)	WLCGSG04	X	X		6.5	2005	16 subsurface sediment	0	610	N	N	Y - RAA-02-20	Category 1 QA2
2005 Portland District O&M Sediment Characterization (Tetra Tech 2006)	WLCDRD05	X	X	X	2 - 11.7	2005	82 surface, 72 subsurface	0	421	N	N	Y - WR-PG-50, WR-VC-50	Category 1 QA2
ExxonMobil Beach Sediment Sheen Samples (Kleinfelder 2004a)	WLCEMH04	X			5.16	2003-2004	4 surface sediment	0	15	N	N	N	Category 1 QA1
Terminal 4 Early Action EE/CA Report (BB&L 2005)	WLCT4C04	X	X	X	4.5	2003-2004	5 sediment trap, 43 subsurface sediment	0	671	Y	N	N	Category 1 QA2
Corps Dredged Material O&M Characterization (Hart Crowser 2004)	WLCDRI03	X	X		3, 8-10, 15, 23	2003	19 subsurface composites, 2 surface reference	0	305	Y	N	N	Category 1 QA2
Gunderson Area 2 Sandy Beach (Kleinfelder 2004b)	WLCGNG03	X			9	2003	4 surface sediment	0	15	N	N	N	Category 1 QA1
International Terminal Sediment Data Report (Floyd Snider McCarthy 2003)	WLCITC03	X			4, 5	2003	20 subsurface sediment	0	518	N	Y	N	Category 1 QA1
ATOFINA Phase 2 Stage 1/2 In-River Investigation (Integral 2003)	WLCEAF02	X	X		8	2002-2003	211 subsurface sediment	0	1,305	N	N	N	Category 1 QA2
City Outfall Source Control Investigation (CH2M Hill 2004)	WLCOFJ02	X	X	X	5-10	2002	84 surface sediment	0	15	N	N	Y - Station 4	Category 1 QA2

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		RI	BERA	BHHRA									
Surface Water, Sediment, and Groundwater Sampling Report (Ecology & Environment 2003)	WLCMBI02	X			7, 8	2002	41 water grabs, 19 water SPMD, 11 subsurface sediment	30	35	N	N	Y - 14 samples	Category 1 QA2, petroleum Category 2
US Moorings RI Sediment Investigation (URS 2003)	WLCMRI02	X	X	X	6, 7	2002	2 surface, 3 subsurface sediment	0	90	Y	N	N	Category 1 QA2
City Outfall Pilot Project (CH2M Hill 2002)	WLCOFH02	X	X	X	9	2002	18 surface sediment	0	15	N	N	N	Category 1 QA2
MarCom Expanded Preliminary Assessment (Parametrix 2002)	WLCMCB02	X			6	2002	3 surface sediment	0	15	N	N	N	Category 1 QA1
GATX Linnton Terminal RI (KHM 2002a)	WLCGXB02	X			5	2002	2 surface sediment	0	15	N	N	N	Category 1 QA1
T4 Slip 3, Berth 410 Dredge Material (Hart Crowser 2002a)	WLCT4L01	X			5	2001	9 subsurface sediment	43	213	Y	Y	N	Category 1 QA1
Willamette Reference Area Phase 2 (Hart Crowser 2002b)	WLLRSI01	X			16, 19, 23, 24	2001	8 surface sediment	0	30	N	N	N	Category 1 QA1
Willamette Reference Area Phase 1 (Hart Crowser 2001a)	WLLRSH01	X			16, 17, 18, 19, 24	2001	9 surface sediment	0	10	N	N	N	Category 1 QA1, grain size Category 2
Cargill Irving Elevator Permit Applications (Harding ESE 2001)	WLCCIF01	X			12	2001	5 subsurface, 1 subsurface pore water	0	109	Y - 1 sample	Y	N	Category 1 QA1
T2/T5 2001 Dredge Characterization Study (Hart Crowser 2001b)	WLCT0F01	X			2, 10	2001	4 subsurface pore water, 7 subsurface sediment	0	240	Y	Y	N	Category 1 QA1
Chevron Dredging Permit Application (PNG 2001)	WLCCPF01	X			8	2001	15 subsurface sediment	30	244	N	Y	N	Category 1 QA1
Gasco Source Control Evaluation (Anchor 2001)	WLCGSD01	X	X	X	7	2001	18 subsurface sediment, 9 surface sediment	0	40	N	Y	Y - AN-2-1 to 2-4	Category 1 QA2

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		RI	BERA	BHHRA									
McCormick & Baxter RI Phase 4 (Ecology & Environment 2001)	WLCMBA01	X			8	2001	32 subsurface sediment, 1 upriver reference surface sediment	0	38	N	N	Y - 13 samples	Category 1 QA1
Goldendale Aluminum Phase 2 (CH2M Hill 2001a)	WLCGAL00	X			11	2000	4 surface sediment	0	30	N	N	N	Category 1 QA1
Oregon Steel Mills Pre-Remedial Investigation Field Activities Data Report (Exponent 2001)	WLCO SJ00	X			2, 3	2000	1 subsurface sediment, 15 surface sediment	0	60	N	N	N	Category 1 QA1
Willbridge 60-in Outfall (KHM 2002b)	WLCWTI00	X			8	2000	13 subsurface sediment	61	229	N	N	N	Category 1 QA1
UPRR Albina Yard Expanded Preliminary Assessment Data Report (Jacobs Engineering 2000a)	WLCA YH00	X			11, 12	2000	3 subsurface sediment, 6 surface sediment	0	69	N	N	N	Category 1 QA1
Marine Finance Expanded Preliminary Assessment Data Report (Jacobs Engineering 2000b)	WLCMFH00	X			6	2000	3 subsurface sediment, 6 surface sediment	0	66	N	N	N	Category 1 QA1
T1 South Sediment Study (SEA 2000)	WLCT1F00	X			11, 12	2000	9 surface pore water, 9 surface sediment	0	10	N	N	N	Category 1 QA1
Goldendale Aluminum Phase 1 (CH2M Hill 2001b)	WLCGAF00	X			11	2000	5 surface sediment, 1 reference surface sediment	0	30	N	Y	N	Category 1 QA1
Ross Island Phase I (Port) (Hart Crowser 2000a)	WLCCRIL99	X			15, 16	1999-2000	6 subsurface pore water, 20 subsurface sediment, 38 surface pore water, 41 surface sediment, 4 surface reference sediment	0	1,798	Y - 1 sample	N	N	Category 1 QA1

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		RI	BERA	BHHRA									
Willamette November Sediment Quality Evaluation (USACE 2000)	WLR1199	X			9, 10, 12	1999	9 subsurface sediment, 7 subsurface pore water, 1 surface sediment	0	386	N	N	N	Category 1 QA1, metals & conventionals Category 2
T5 1999 Berths 501-503 Sediment Characterization Study (Hart Crowser 1999a)	WLCT5K99	X			1, 2	1999	5 subsurface sediment, 5 subsurface pore water	0	182	Y - 2 samples	Y	N	Category 1 QA1, grain size Category 2
Ross Island Lagoon Baseline (Landau 2000a)	WLCRIJ99	X			16	1999	4 surface pore water, 12 surface sediment	0	10	Y - 1 sample	N	N	Category 1 QA1
Ross Island Phase 1 (Ross Island Sand & Gravel) (Landau 2000b)	WLCRIV99	X			15, 16	1999	4 surface sediment, 41 subsurface sediment	0	79	N	N	N	Category 1 QA2
GATX Linnton Terminal ESA (KHM 1999)	WLCGV99	X			5	1999	4 surface sediment, 4 subsurface sediment	0	40	N	N	N	Category 1 QA1
McCormick & Baxter RI Phase 3 (Ecology & Environment 2001)	WLCMBJ99	X	X	X	8	1999	44 site and 4 upriver reference surface sediment	0	15	N	N	Y - 30 samples	Category 1 QA2
Willamette April Sediment Quality Evaluation (USACE 1999a)	WLR0499	X			3, 9, 10	1999	11 subsurface sediment, 3 pore water	0	366	N	N	N	Category 1 QA1, metals & conventionals Category 2

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		RI	BERA	BHHRA									
Portland Harbor Sediment Investigation (Weston 1998)	WR-WSI98	X	X	X	4 - 10	1997-1999	158 surface sediment, 28 surface pore water, 39 subsurface sediment	0	90	Y - 12 samples	Y - SD029, SD032	Y - SD76, 79, 82, 64, 65	Category 1 QA2
TOSCO 1999 Sediment Sampling Results (Exponent 1999a)	TOSCO99	X	X		8	1999	4 subsurface sediment, 1 surface reference	0	304	Y	N	N	Category 1 QA2
Elf Atochem 1999 Willamette River (Exponent 1999b)	WLREL99	X			8	1998-1999	15 subsurface sediment, 13 surface sediment	0	90	N	N	N	Category 1 QA1
Willbridge Terminal Facility RI (KHM 2000)	WLRWTF98	X			8	1998	15 surface sediment	0	12.7	N	N	N	Category 1 QA1
T2/T4 Sediment Study (Hart Crowser 1999b)	PPTLDT24	X			6, 10	1998	3 subsurface pore water, 3 subsurface sediment	0	91	Y	Y	N	Category 1 QA1, grain size Category 2
Port of Portland T4 RI (Hart Crowser 2000b)	WLCT4J98	X			5	1998	18 subsurface sediment, 44 surface sediment, 2 surface reference sediment	0	128	N	N	N	Category 1 QA1
Sediment Characterization Local Sponsors' Berths (conducted with Corps) (Hart Crowser 1999c)	WLCT0I98	X			2, 5-8, 10-12	1998	7 subsurface pore water, 7 subsurface sediment, 12 surface pore water, 12 surface sediment	0	152	Y - 6 subsurface	N	N	Category 1 QA1
International Terminals Sediment Sampling Event (Schnitzer Steel Industries 1998)	WLCITH98	X			4	1998	5 surface sediment	0	15	N	N	N	Category 1 QA1

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Survey Name	Survey ID	Data Use			River Mile(s)	Year	Number of Samples	Sample Interval Top (cm)	Sample Interval Bottom (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
		RI	BERA	BHHRA									
Portland Shipyard Sediment Investigation (SEA 1998)	PSYSEA98	X	X	X	8, 9, 10, 11	1998	65 subsurface sediment, 60 surface sediment, 61 surface pore water, 3 surface reference	0	490	N	N	N	Category 1 QA2, conventionals QA1
Portland Shipyard Environmental Audit (Dames & Moore 1998)	PSYD&M97	X	X	X	9	1997-1998	4 subsurface sediment, 8 surface	0	304	N	N	N	Category 1 QA2
Willamette River 1998 Data (Dames & Moore 1998)	WRD&M98	X	X	X	7, 8, 9, 10, 11	1998	12 surface sediment	0	10	N	N	N	Category 1 QA2
T4 Berth 416 1997 Sediment Characterization Study (Hart Crowser 1998)	WLCT4J97	X			5, 6	1997	4 subsurface sediment, 4 subsurface pore water	0	182	Y - 1 sample	Y	N	Category 1 QA1
Baseline Sediment Riedel (MFA 1997)	RIEDEL97	X			8	1997	19 subsurface sediment, 8 surface sediment	0	460	N	N	N	Category 1 QA1
CRCD - Willamette River Channel Deepening (USACE 1999b)	WLR0797	X			1-9, 11, 12	1997	18 surface sediment, 17 surface pore water, 50 subsurface sediment, 1 subsurface pore water	0	690	Y - 3 samples	Y - WRGC30, WRGC31	N	Category 1 QA1, grain size & conventionals Category 2
PAH in surface sediments (Battelle 2002)	WLCASF97	X	X	X	5, 6, 7, 8, 9	1997	37 surface sediment	0	10	N	N	Y - Sta 1	Category 1 QA2
T4 Berths 410,411 Maintenance Dredging (Hart Crowser 1997)	WLCT4E97	X			5	1997	3 subsurface sediment	0	152	N	Y	N	Category 1 QA1

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Survey ID	Data Use			River Mile(s)	Year	Number of Samples	Sample Interval Top (cm)	Sample Interval Bottom (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
		RI	BERA	BHHRA									
BP Bulk Terminal 22T Supplemental Sediment and Revetment Investigation (URS 2007)	WLCBPE06	X			4.8 - 4.9	2003-2006	48 surface sediment, 66 subsurface sediment	0	1,036	N	Y	N	Mixture of Category 1 QA1 and Category 2
Gasco Phase 2 Offshore Investigation (Anchor 2008d)	WLCGSG07	X			6.1 - 6.4	2007	24 subsurface sediment	0	457	N	N	N	Category 1 QA1
Gasco Phase 1 Offshore Investigation (Anchor 2007d)	WLCGSJ06	X			6.1 - 6.5	2006-2007	186 subsurface sediment	0	582	N	N	N	Category 1 QA1
Sulzer Pump, 16 riparian samples (GeoDesign 2004)	WLCSPL03	X			10.2 - 10.3	2003	16 surface sediment	0	15	N	N	N	Category 1 NA
T4 Anchor Appendix G sediment data (Anchor 2008e)	WLCT4G06	X			4.4 - 4.7	2006-2007	76 surface sediment, 68 subsurface sediment	0	305	N	Y - 17 samples	N	Category 1 QA1
Willbridge Terminal 2002 Post-Dredging Sediment Characterization (PNG and Anchor 2002)	WLCWTG02	X			7.6 - 7.7	2002	17 surface sediment	0	15	N	N	N	Category 1 QA1
Zidell Waterfront Property RI: Riverbank Characterization (MFA 2004)	WLCZDH04	X			13.5 - 14	2004	50 surface sediment	0	15	N	N	N	Category 1 QA1
Zidell Waterfront Property RI (MFA 2003)	WLCZDI00	X			13.4 - 14.1	1997-2003	46 surface sediment, 46 subsurface sediment, 19 surface pore water	0	320	N	N	N	Category 1 QA1
Blue Heron & West Linn (Ecology & Environment 2007)	WLFLH07	X			21.5 - 28.5	2007	19 surface sediment	0	10	N	N	N	Category 1 QA2
Biota													
USEPAs PBDEs in Osprey Eggs (USGS 2009)	WLRASE08	X	X		3-77.3	2008	15	--	--	Y	N	N	Category 1 QA2, PBDEs Category 2
USEPA PBDE in LWG R3 Fish Tissue	LWG03	X	X		1-12.1	2007	121	--	--	Y	N	N	Category 1 QA2

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Survey ID	Data Use			River Mile(s)	Year	Number of Samples	Sample Interval Top (cm)	Sample Interval Bottom (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category	
		RI	BERA	BHHRA										
ATSDR/EPA/ODHS Fish Contaminant Study (ODHS, USEPA and ASTDR 2003)	WLTASE03	X	X		lamprey - RM26, sturgeon - RM3.5-9.2, chinook - Clackamas Hatchery	2003	4 lamprey, up to 6 chinook fillet - skin on, up to 5 chinook whole body, up to 6 sturgeon fillet - skin off	--	--	Y - lamprey	--	--	Category 1 QA2	
Surface Water														
Gasco Phase 2 Offshore Investigation (Anchor 2008d)	WLCGSG07	X			5.9-6.7	2007	360 (180 unfiltered; 180 filtered) surface water samples	Near-surface, mid-depth, near-bottom	--	N	--	--	Category 1 QA1	
Siltronic Supplemental In-River (SIR) transition zone water (MFA 2005b)	WLCSLH01	X			6.4-6.5	2005	22 surface water samples	1 ft above mudline	--	N	--	--	Category 1 QA2	
City of Portland TSS Data (City of Portland 2006a)	WLC1200Z	X			1.1 - 20	1996-2006	2,520 compositized surface water grabs	10 ft from surface	--	Y	--	--	None	
Groundwater														
Siltronic Supplemental In-River Transition Zone Water (MFA 2005b)	WLCSLH01	X	X	X	6.4 - 6.8	2001-2005	76 TZW samples	up to 87 ft below mudline	--	N	--	--	Category 1 QA2	
Gasco Phase 2 Offshore Investigation (Anchor 2008d)	WLCGSG07	X			6.4	2007	18 TZW samples	Unknown	--	N	--	--	Category 1 QA1	
Stormwater/Seeps														
Rhone-Poulenc Outfalls 22B and 22C Stormwater (AMEC 2003, 2004a, 2005)	WLCRPI04	X		X	6.8, 6.9	1993-2004	9 samples on 7 dates	--	--	N	N	N	Category 1 QA2	

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Survey ID	Data Use			River Mile(s)	Year	Number of Samples	Sample Interval Top (cm)	Sample Interval Bottom (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category	
		RI	BERA	BHHRA										
GE Spring/Summer 2007 Stormwater Outfall Monitoring (AMEC 2007)	WLCGED07	X			9.6	2007	4 outfall water	--	--	N	--	--	Category 1 QA2, Conventional Category 2	
T4 Spring 2007 Stormwater Outfall Monitoring (Ash Creek Associates/Newfields 2008)	WLCT4C07	X			4.2 - 5.1	2007	24 outfall water	--	--	N	--	--	Category 1 QA1, PCB Congeners QA2	
Joint Source Control Strategy	See Table 4.4-5	X			2-10.8	2004-2008	See Table 4.4-5	--	--	See Table 4.4-5	--	--	Category 1 QA1 and QA2 (see Table 4.4-5)	
Sediment Traps														
RM 11E Focused Sediment Characterization – In-River Sed Traps (GSI 2010b)	RM11E_ST	X			11-12	2009-2010	13	--	--	--	N	N	Category 1 QA2	

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
Sediments											
PGE Willamette River Sediment Investigation (RM 13.1-13.5) (URS 2010)	X	X		X	X	X		X		X	Petroleum
2009 Conoco Philips Pre-dredge Characterization (AMEC 2010a)	X	X	X	X	X	X				X	Petroleum
Sediment Characterization Report: Portland Ship Repair Yard (ERM-West 2009)	X	X	X	X	X	X					
RM 11E Focused Sediment Characterization – Bank Soil and Debris (GSI 2010a)	X	X	X	X	X	X		X		X	Petroleum
Arkema Draft Removal Action Area Characterization Report (Integral and Arcadis 2010)	X		X	X	X	X		X	X	X	Asbestos
Sediment Investigation Report Portland Gas Manufacturing Site (Anchor QEA 2009b)	X	X		X			X		X	X	Petroleum
RM11E sediment data (GSI 2009a)	X	X	X	X	X	X		X		X	Atterberg
Willamette River FNC Post Office Bar Reach (RM2.2) Sediment Quality Evaluation (USACE 2009)	X	X	X	X	X	X			X	X	Petroleum
T4 Abatement Phase 1 - Construction Phase 1 - Dredging and Capping (Anchor QEA 2009c)	X	X		X	X	X				X	Petroleum
2009 Interim Construction Report, Revetment SCM at BP Terminal 22T (URS 2009)	X	X		X						X	Petroleum
Chevron Willbridge Terminal 2008/2009 Pre-Dredge Sed. Investigations (Arcadis 2009)	X	X	X	X	X	X			X	X	Petroleum
Northwest Pipe & Casing, International Terminals Slip Sed Data 2009 (CH2M Hill 2009)	X	X		X	X						
Downtown Portland Sediment Characterization Phase II Report (GSI and Hart Crowser 2010)	X	X	X	X	X	X		X		X	Petroleum
Downtown Portland Sediment Characterization Field and Data Report (GSI 2009b)	X	X	X	X	X	X		X	X	X	Petroleum analyzed
US Moorings, Portland, OR: RI 2008 Sediment Sampling (KTA/TEC 2010)	X	X	X	X	X	X			X	X	Petroleum
Memo: Zidell Sediment Data Qualifiers. Maul Foster Alongi, 5/2009 (MFA 2009)	X	X	X	X	X						
Sediment Data Report, Ash Grove Cement Company, Portland, OR (Parson Brinckerhoff 2005)	X	X		X	X	X					

Table 2.0-2. Summary of Investigations Performed
by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
Post-Dredge Char., Glacier Northwest Cement Term., Portland, OR (Anchor 2004b)	X				X						
USEPA's PBDE data in LWG Sediment Grab Samples									X	PBDE congeners	
Dredge Characterization, Glacier Northwest Cement Term., Portland, OR (Anchor 2003)	X	X		X	X	X			X	Petroleum	
Post-dredge sampling of Willamette River bottom at CLD Pacific Grain ^a (CLD 2002)	X			X	X						
Pre-Dredge Sediment Sampling Goldendale Aluminum Company, Portland, OR (CH2M Hill 1999)	X	X		X	X	X					
Gasco EE/CA (Anchor 2006d)	X	X		X		X			X	X	TPH - diesel, residual range; cyanide
2005 Portland District O&M Sediment Characterization (Tetra Tech 2006)	X	X	X	X	X	X			X		TPH - gasoline, #2 diesel, motor oil
ExxonMobil Beach Sediment Sheen Samples (Kleinfelder 2004a)									X		Petroleum analyzed
Terminal 4 Early Action EE/CA Report (BB&L 2005)	X	X		X	X	X			X		TPH - gasoline, diesel, residual range
Corps Dredged Material O&M Characterization (Hart Crowser 2004)	X	X	X	X	X	X					
Gunderson Area 2 Sandy Beach (Kleinfelder 2004b)	X	X	X	X	X				X	X	Petroleum analyzed
International Terminal Sediment Data Report (Floyd Snider McCarthy 2003)	X	X	X	X	X	X					
ATOFINA Phase 2 Stage 1/2 In-River Investigation (Integral 2003)	X					X					174 samples field screened for 4,4'-DDT, 40 samples lab tested for pesticides
City Outfall Source Control Investigation (CH2M Hill 2004)	X	X		X		X	X		X		Diesel, lube oil

Table 2.0-2. Summary of Investigations Performed
by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
Surface Water, Sediment, and Groundwater Sampling Report (Ecology & Environment 2003)		X		X							
US Moorings RI Sediment Investigation (URS 2003)	X	X	X	X	X	X					TPH - diesel, motor oil
City Outfall Pilot Project (CH2M Hill 2002)	X	X		X	X	X				X	Herbicides and petroleum also analyzed
MarCom Expanded Preliminary Assessment (Parametrix 2002)		X	X	X							SVOCs limited to PAHs
GATX Linnton Terminal RI (KHM 2002a)	X			X						X	Petroleum analyzed
T4 Slip 3, Berth 410 Dredge Material (Hart Crowser 2002a)	X	X		X	X	X					
Willamette Reference Area Phase 2 (Hart Crowser 2002b)	X	X	X	X	X	X					5 samples analyzed for conventionals only; pore water analyzed for butyltins
Willamette Reference Area Phase 1 (Hart Crowser 2001a)	X				X	X				X	Petroleum also analyzed
Cargill Irving Elevator Permit Applications (Harding ESE 2001)	X	X	X	X	X	X					Pore water analyzed for butyltins
T2/T5 2001 Dredge Characterization Study (Hart Crowser 2001b)	X	X	X	X	X	X					Pore water analyzed for butyltins
Chevron Dredging Permit Application (PNG 2001)	X	X	X	X	X	X			X	X	Petroleum analyzed
Gasco Source Control Evaluation (Anchor 2001)	X	X		X					X		SVOCs limited to PAHs

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
McCormick & Baxter RI Phase 4 (Ecology & Environment 2001)	X			X							SVOCs limited to PAHs and phenols
Goldendale Aluminum Phase 2 (CH2M Hill 2001a)	X			X							
Oregon Steel Mills Pre-Remedial Investigation Field Activities Data Report (Exponent 2001)	X	X		X	X					X	Petroleum analyzed
Willbridge 60-in Outfall (KHM 2002b)	X	X		X					X	X	Only one sample analyzed for metals; SVOCs, VOCs, and petroleum analyzed
UPRR Albina Yard Expanded Preliminary Assessment Data Report (Jacobs Engineering 2000a)	X	X	X	X	X					X	Petroleum analyzed
Marine Finance Expanded Preliminary Assessment Data Report (Jacobs Engineering 2000b)	X	X	X	X	X					X	Petroleum analyzed
T1 South Sediment Study (SEA 2000)	X	X	X	X	X	X			X		Pore water analyzed for butyltins
Goldendale Aluminum Phase 1 (CH2M Hill 2001b)	X	X	X	X	X	X			X		
Ross Island Phase I (Port) (Hart Crowser 2000a)	X	X	X	X	X	X			X	X	Pore water analyzed for butyltins, petroleum analyzed

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
Willamette November Sediment Quality Evaluation (USACE 2000)	X	X	X	X	X	X					Pore water analyzed for butyltins
T5 1999 Berths 501-503 Sediment Characterization Study (Hart Crowser 1999a)	X	X	X	X	X	X					Pore water analyzed for butyltins
Ross Island Lagoon Baseline (Landau 2000a)	X	X	X	X	X	X					Pore water analyzed for butyltins
Ross Island Phase 1 (Ross Island Sand & Gravel) (Landau 2000b)	X	X	X	X	X	X			X	X	Petroleum analyzed in subsurface only
GATX Linnton Terminal ESA (KHM 1999)	X	X		X	X	X			X		VOCs not analyzed in all samples
McCormick & Baxter RI Phase 3 (Ecology & Environment 2001)	X	X		X				X			SVOCs limited to PAHs and phenols; PCDD/Fs not analyzed in all samples
Willamette April Sediment Quality Evaluation (USACE 1999a)	X	X	X	X	X	X		X		X	All samples also analyzed for herbicides; 2 samples analyzed for PCDD/Fs; porewater analyzed for butyltins

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
Portland Harbor Sediment Investigation (Weston 1998)	X	X	X	X	X	X	X	X		X	Some samples analyzed for herbicides, PCDD/Fs, PCB congeners, and butyltins; pore water analyzed for butyltins and metals
TOSCO 1999 Sediment Sampling Results (Exponent 1999a)	X	X		X	X	X					
Elf Atochem 1999 Willamette River (Exponent 1999b)	X			X		X			X		
Willbridge Terminal Facility RI (KHM 2000)	X	X		X		X			X		SVOCs sometimes limited to PAHs
T2/T4 Sediment Study (Hart Crowser 1999b)	X	X	X	X	X	X					
Port of Portland T4 RI (Hart Crowser 2000b)	X	X		X		X			X	X	Not all samples analyzed for metals or VOCs; petroleum analyzed
Sediment Characterization Local Sponsors' Berths (conducted with Corps) (Hart Crowser 1999c)	X	X	X	X	X	X					Pore water analyzed for butyltins
International Terminals Sediment Sampling Event (Schnitzer Steel Industries 1998)	X	X	X	X		X					

Table 2.0-2. Summary of Investigations Performed
by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
Portland Shipyard Sediment Investigation (SEA 1998)	X	X	X	X	X	X			X		Butyltins, pesticides, and VOCs not analyzed in all samples; pore water analyzed for butyltins
Portland Shipyard Environmental Audit (Dames & Moore 1998)	X	X	X	X	X				X		Butyltins and VOCs not analyzed in all samples; SVOCs sometimes limited to PAHs and phthalates
Willamette River 1998 Data (Dames & Moore 1998)	X	X	X	X	X						SVOCs limited to PAHs and phthalates; butyltins analyzed in 7 samples
T4 Berth 416 1997 Sediment Characterization Study (Hart Crowser 1998)	X	X	X	X	X	X					Porewater analyzed for butyltins
Baseline Sediment Riedel (MFA 1997)	X	X	X	X							Limited SVOCs analyses
CRCD - Willamette River Channel Deepening (USACE 1999b)	X	X	X	X	X	X					Pore water analyzed for butyltins
PAH in surface sediments (Battelle 2002)	X			X							
T4 Berths 410,411 Maintenance Dredging (Hart Crowser 1997)	X	X	X	X	X	X					Pore water analyzed for butyltins

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
BP Bulk Terminal 22T Supplemental Sediment and Revetment Investigation (URS 2007)	X	X		X	X	X				X	Herbicides
Gasco Phase 2 Offshore Investigation (Anchor 2008d)	X	X		X				X	X	X	Herbicides
Gasco Phase 1 Offshore Investigation (Anchor 2007d)	X	X		X					X		Grain size, atterburg limits
Sulzer Pump, 16 riparian samples (GeoDesign 2004)	X	X		X						X	TPH - diesel, heavy oil; SVOCs limited to PAH
T4 Anchor Appendix G sediment data (Anchor 2008e)	X	X		X	X	X				X	TPH - diesel, heavy oil
Willbridge Terminal 2002 Post-Dredging Sediment Characterization (PNG and Anchor 2002)	X	X	X	X	X	X			X		
Zidell Waterfront Property RI: Riverbank Characterization (MFA 2004)			X	X	X						SVOCs limited to PAH
Zidell Waterfront Property RI (MFA 2003)	X	X	X	X	X				X	X	TPH - diesel, heavy oil, lube oil, mineral spirits, Jet A, JP-4, kerosene, total petroleum hydrocarbons, and non-petroleum hydrocarbons
Blue Heron & West Linn (Ecology & Environment 2007)	X	X		X	X	X	X	X	X		
Biota											
USEPAs PBDEs in Osprey Eggs (USGS 2009)	X	X		X	X	X	X	X	X	X	PBDE congeners
USEPA PBDE in LWG R3 Fish Tissue										X	PBDE congeners

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
ATSDR/EPA/ODHS Fish Contaminant Study (ODHS, USEPA and ASTDR 2003)		X		X	X	X	X	X		X	PBDEs
Surface Water											
Gasco Phase 2 Offshore Investigation (Anchor 2008d)	X	X									Field parameters; free, amenable, and total cyanide; TSS; TOC; iron; and sulfides
Siltronic Supplemental In-River (SIR) transition zone water (MFA 2005b)	X			X					X		Field parameters and VOCs (including naphthalene and five SVOCs)
City of Portland TSS Data (City of Portland 2006a)	X										TSS
Groundwater											
Siltronic Supplemental In-River Transition Zone Water (MFA 2005b)	X	X		X					X	X	Herbicides, field measurements, lube oil, and diesel range hydrocarbons
Gasco Phase 2 Offshore Investigation (Anchor 2008d)	X	X		X					X		
Stormwater/Seeps											
Rhone-Poulenc Outfalls 22B and 22C Stormwater (AMEC 2003, 2004a, 2005)	X	X		X	X	X		X	X	X	Herbicides, TPH - gas, diesel, and motor oil

Table 2.0-2. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Conven-tionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed
GE Spring/Summer 2007 Stormwater Outfall Monitoring (AMEC 2007)	X	X		X	X		X			X	TPH - diesel; SVOCs limited to PAH and phthalates
T4 Spring 2007 Stormwater Outfall Monitoring (Ash Creek Associates/Newfields 2008)	X	X		X	X	X	X			X	Total petroleum hydrocarbons
Joint Source Control Strategy	X	X		X	X	X	X			X	Analytes specific to each survey are listed in Table 4.4-5.
Sediment Traps											
RM 11E Focused Sediment Characterization – In-River Sed Traps (GSI 2010b)	X	X	X	X	X	X	X	X		X	Petroleum

Notes:

^aTwo subsurface sediment samples collected from the CLD Pacific facility in 2009 were Category 2 data and were not used in the RI.

Risk evaluations database lockdown date: June 2, 2008 (in general) and RI database lockdown date: July 19, 2010.

For risk evaluation and nature and extent discussions, only data collected since May 1997 are used. Sediment samples collected from dredged or capped areas are removed for risk evaluations.

Risk evaluations use data with a Category 1 QA2 level of validation, and sediment samples must be collected from within the top 30.5 cm of the sediment horizon.

Nature and extent discussions use data with a Category 1 QA1 or QA2 level of validation. Surface sediments represent those collected from the top 40 cm.

Table 2.1-1. Summary of Sediment Types from 2000 STA Survey of Lower Willamette River from Willamette Falls to the Columbia River (RM 0 to 26).

Sediment Type	# of Samples	Percentage
Sandy gravel	2	0.20%
Gravelly sand	16	1.70%
Sand	305	32.60%
Muddy sand	180	19.30%
Sandy mud	296	31.60%
Mud	37	4.00%
Hard ground	99	10.60%
Total	935	100%

Table 2.2-1. Summary of RAOs, Data Gaps, and Sampling Locations.

Preliminary RAO	Data Gap	Sampling Locations ^a
Reduce risks associated with direct contact with and incidental ingestion of contaminated sediments to acceptable levels (or ambient levels) for human health.	Areal extent of contamination in surface sediment. Sediment characteristics including grainsize and total organic content. River locations with potential for sediment contact (i.e., use areas).	Composite sediment samples will be collected along beaches in human use areas.
Reduce risks associated with eating contaminated fish to acceptable levels (or ambient levels) for human health.	Contaminant concentrations and lipids in tissues of species consumed by people. Rate of contaminant transfer between sediment and tissue. Location of fishing/collection areas.	Four fish species that have documented human consumption will be collected and analyzed. Samples will be collected from three areas: between RM 3 and 6; between RM 6 and 9; and below Willamette Falls. Each sample will be a composite of at least 5 fish.
Reduce risks associated with ingestion of contaminated sediments to acceptable levels (or ambient levels) for fish, benthos, birds and mammals.	Areal extent of contamination in surface sediment. Species-specific rates of sediment ingestion. Occurrence/home ranges of target receptors. Sediment characteristics including grainsize and total organic content.	Sediment samples will be placed in nearshore areas where tissue samples will be collected to support the BERA. Also, the composite sediment data collected for input into the BHHRA will be used to evaluate potential risks to ecological receptors in those areas. Lastly, the nature and extent sediment samples will be used to evaluate potential risks to subtidal fish species and benthic infaunal communities.
Reduce risks associated with ingestion of contaminated prey to acceptable levels (or ambient levels) for fish, benthic organisms, birds and mammals.	Contaminant concentrations in tissues of prey. Tissue contaminant concentrations in target receptors. Rate of prey consumption for various receptors. Home ranges of prey and target receptors. Rate of contaminant transfer between sediment and receptor, sediment and prey, and/or prey and receptor. Site-specific no- and low-effect levels in tissue.	Tissue samples for six fish species will be collected from locations in the ISA as well as from below Willamette Falls.

Table 2.2-1. Summary of RAOs, Data Gaps, and Sampling Locations.

Preliminary RAO	Data Gap	Sampling Locations ^a
Promote remedial actions that do not limit current or planned waterway, municipal, commercial, industrial, recreational, or tribal ceremonial uses.	Location of areas requiring remediation. Volume of sediments requiring remediation Current and future uses of the river. Remedial technologies and associated constraints when applied on a site-specific basis.	All sampling contemplated for the RI/FS (i.e., subtidal sediments, intertidal sediments, fish tissues, benthic tissues) will be used to identify potential remediation areas
Promote remedial actions that are feasible for the physical system of this river.	Location of depositional, erosional, and variable areas of the river. Rate of accumulation of clean sediment in depositional areas and rate of sediment loss in erosional areas of the river. Physical characteristics of sediment (grainsize, organic carbon, water content, specific gravity). Potential for recontamination from ongoing upstream or permitted activities Hydrodynamics and sediment transport in river Seasonal changes in bathymetry	Sampling will include additional precision bathymetry surveys throughout the ISA and extending somewhat beyond the ISA, monitoring of sediment stake elevations in nearshore areas of the lower Willamette River (see Round 1A SAP), conventional sediment parameters at all sediment sampling locations, and current measurements along multiple transects within the ISA.
Promote remedial actions that are consistent and integrated with natural resource damage assessment findings and restoration plans.	Habitats available in the river Species occurrence and use. Resource agency habitat restoration goals/priorities.	

Notes:

^a Sampling locations are mapped in the Portland Harbor Round 1 Field Sampling Plan.

BERA - baseline ecological risk assessment

BHHRA - baseline human health risk assessment

ISA - initial study area

RAO - remedial action objective

RM - river mile

SAP - sampling and analysis plan

Table 2.3-1. Elements of Summary and Full Data Validations for Environmental Chemistry Data.

Element	Applicable Analytes	Summary Data Validation (QA1)	Full Data Validation (QA2)
Quality control analysis frequencies	all	X	X
Analysis holding times	all	X	X
Instrument performance check	organic compounds, ICP-MS metals		X
Initial instrument calibration	all		X
Continuing instrument calibration	all		X
Laboratory blanks	all	X	X
ICP interference check sample	metals		X
System monitoring compounds (surrogates)	organic compounds	X	X
Matrix spikes/matrix spike duplicates	all	X	X
Laboratory control samples	all	X	X
ICP serial dilution	metals		X
Field QA/QC (field blanks, field duplicates)	all	X	X
Internal standards	VOCs, SVOCs, ICP-MS metals		X
Pesticide cleanup checks	pesticides/PCBs		X
Target compound identification and quantitation (requires verification of reported results with raw data)	organic compounds		X
RLs	all	X	X

Notes:

ICP-MS - inductively coupled plasma-mass spectrometry

PCB - polychlorinated biphenyl

QA/QC - quality assurance/quality control

RL - reporting limit

SVOC - semivolatile organic compound

VOC - volatile organic compound

Table 2.3-2. Summary of All Category 1 and Category 2 Results in the RI Data Set.

Analyte Group	Category 1	Category 2 ^a	Grand Total
Grain Size	47,513	9	47,522
Atterberg Limits	475		475
Asbestos	22		
Conventional	24,566	2,515	27,081
Metals	80,285	153	80,438
Butyltins	7,230	8	7,238
PCB Aroclors	41,053	80	41,133
PCB Congeners	241,033		241,033
PBDE Congeners	2,028	225	2,253
PCB Homologs	12,046		12,046
PCDD/Fs	24,659	17	24,676
PCDD/F Homologs	15,182	11	15,193
Pesticides	139,180	72	139,252
Herbicides	7,816	10	7,826
PAHs	159,975	396	160,371
Phthalates	28,492	6	28,498
SVOCs	120,641	87	120,728
Phenols	58,934	22	58,956
VOCs	91,343	480	91,823
Petroleum	13,770	57	13,827
Radioisotopes	444		444
Grand Total	1,116,687	4,148	1,120,813

Notes:

^a Conventional include surface water total suspended solids data reported in the 1200Z permitting process.

PAH - polycyclic aromatic hydrocarbon

PBDE - polybrominated diphenyl

PCB - polychlorinated biphenyl

PCDD/F - dioxin/furan

SVOC - semivolatile organic compound

VOC - volatile organic compound

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Subsurface Sediment							
Grain Size							
< 0.075 mm		2		232			234
> 0.075 mm				63			63
>10 Phi clay		2		76			78
>9 Phi clay	17	61	11	977	3	1,069	
8-9 Phi clay	17	63	11	1,053	3	1,147	
9-10 Phi clay		2		76			78
Clay	2	62		551	14		629
Coarse sand	17	118	11	1,241	14	3	1,404
Coarse silt	17	63	11	1,053	3	1,147	
Fine gravel	17	116	11	1,049	14	3	1,210
Fine sand	17	118	11	1,241	14	3	1,404
Fine silt	17	63	11	1,053	3	1,147	
Fines	19	128	11	1,627	14	3	1,802
Granule				24			24
Gravel	2	12		257			271
Mean grain size	2			19			21
Median grain size	2			19			21
Medium gravel	17	116	11	1,070	14	3	1,231
Medium sand	17	118	11	1,241	14	3	1,404
Medium silt	17	63	11	1,053	3	1,147	
Medium-fine gravel				24			24
Sand	2	10		165			177
Sieve 1 inch				233			
Sieve 1.5 inch				233			
Sieve 10		2		407			409
Sieve 100				15			15
Sieve 140		2		392			394
Sieve 2 inch				233			
Sieve 20		2		407			409
Sieve 200		2		407			409
Sieve 230				238			238
Sieve 3 inch				233			
Sieve 3/4 inch				233			
Sieve 3/8 inch				233			
Sieve 4		2		407			409
Sieve 40		2		407			409
Sieve 60		2		407			409
Silt	2	62		551	14		629
Very coarse sand	17	118	11	1,238	14	3	1,401
Very fine sand	17	118	11	1,238	14	3	1,401
Very fine silt	17	63	11	1,053	3	1,147	
Atterberg Limits							
Liquid Limit				63			63
Plastic Limit				71			71
Plasticity Index				63			63
Conventionals							
Acid Volatile Sulfides	9			25			34
Ammonia	7	14		220	14		255
Chloride				10			
Cyanide		57		145			202
Moisture				110			110
Nitrate				12			12
Nitrite				10			
pH				24			24
Phosphorus		15					15
Specific Gravity	17	25	11	1,002			1,055
Sulfate				36			36
Sulfide	7	62		219	5		293
Total organic carbon	33	142	14	2,060	68	3	2,320
Total solids	36	146	14	2,238	74	3	2,511
Total volatile solids	7			158	14		179
Asbestos							
Amosite				4			
Asbestos				14			
Chrysotile				4			

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Metals							
Aluminum	17	85	14	1,098		3	1,217
Antimony	24	117	14	1,300	71	3	1,529
Arsenic	33	173	14	1,636	73	3	1,932
Arsenic pentavalent				8			8
Arsenic trivalent				8			8
Barium		15		145			160
Beryllium		15		116			131
Cadmium	33	173	14	1,641	73	3	1,937
Calcium				89			89
Chromium	33	173	14	1,572	54	3	1,849
Chromium hexavalent				45			45
Cobalt				48			48
Copper	33	173	14	1,636	73	3	1,932
Iron		56		92			148
Lead	33	173	14	1,738	73	3	2,034
Magnesium				99			99
Manganese				162			162
Mercury	33	173	14	1,514	73	3	1,810
Nickel	33	109	14	1,616	73	3	1,848
Potassium				99			99
Selenium	17	94		1,131		3	1,245
Silver	33	158	14	1,568	73	3	1,849
Sodium				99			99
Thallium		15		116			131
Tin				3			3
Titanium				27			27
Vanadium				48			48
Zinc	33	173	14	1,734	73	3	2,030
Butylins							
Butyltin ion		49		367	35	3	454
Dibutyltin ion		49		367	36	3	455
Tetrabutyltin		49		368	36	3	456
Tributyltin				6			6
Tributyltin ion		64		418	50	3	535
PCB Aroclors							
Aroclor 1016	33	99	14	1,515	66	3	1,730
Aroclor 1221	33	99	14	1,515	66	3	1,730
Aroclor 1232	33	99	14	1,515	66	3	1,730
Aroclor 1242	33	99	14	1,515	66	3	1,730
Aroclor 1248	33	99	14	1,515	66	3	1,730
Aroclor 1254	33	99	14	1,515	66	3	1,730
Aroclor 1260	33	99	14	1,515	66	3	1,730
Aroclor 1262	17	95	14	1,264		3	1,393
Aroclor 1268	17	95	14	1,264		3	1,393
Total PCB Aroclors	33	99	14	1,515	66	3	1,730
PCB Congeners							
Total PCB TEQ (ND = 0)				151			151
PCB001				151			151
PCB002				151			151
PCB003				151			151
PCB004 & 010				151			151
PCB005 & 008				151			151
PCB006				151			151
PCB007 & 009				151			151
PCB011				151			151
PCB012 & 013				151			151
PCB014				151			151
PCB015				151			151
PCB016 & 032				151			151
PCB017				151			151
PCB018				151			151
PCB019				151			151
PCB020 & 021 & 033				151			151
PCB022				151			151
PCB023				151			151

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB024 & 027				151			151
PCB025				151			151
PCB026				151			151
PCB028				151			151
PCB029				151			151
PCB030				151			151
PCB031				151			151
PCB034				151			151
PCB035				151			151
PCB036				151			151
PCB037				151			151
PCB038				151			151
PCB039				151			151
PCB040				151			151
PCB041 & 064 & 071 & 072				151			151
PCB042 & 059				151			151
PCB043 & 049				151			151
PCB044				151			151
PCB045				151			151
PCB046				151			151
PCB047				151			151
PCB048 & 075				151			151
PCB050				151			151
PCB051				151			151
PCB052 & 069				151			151
PCB053				151			151
PCB054				151			151
PCB055				151			151
PCB056 & 060				151			151
PCB057				151			151
PCB058				151			151
PCB061 & 070				151			151
PCB062				151			151
PCB063				151			151
PCB065				151			151
PCB066 & 076				151			151
PCB067				151			151
PCB068				151			151
PCB073				151			151
PCB074				151			151
PCB077				151			151
PCB078				151			151
PCB079				151			151
PCB080				151			151
PCB081				151			151
PCB082				151			151
PCB083				151			151
PCB084 & 092				151			151
PCB085 & 116				151			151
PCB086				151			151
PCB087 & 117 & 125				151			151
PCB088 & 091				151			151
PCB089				151			151
PCB090 & 101				151			151
PCB093				151			151
PCB094				151			151
PCB095 & 098 & 102				151			151
PCB096				151			151
PCB097				151			151
PCB099				151			151
PCB100				151			151
PCB103				151			151
PCB104				151			151
PCB105				151			151
PCB106 & 118				151			151
PCB107 & 109				151			151
PCB108 & 112				151			151
PCB110				151			151

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB111 & 115				151			151
PCB113				151			151
PCB114				151			151
PCB119				151			151
PCB120				151			151
PCB121				151			151
PCB122				151			151
PCB123				151			151
PCB124				151			151
PCB126				151			151
PCB127				151			151
PCB128 & 162				151			151
PCB129				151			151
PCB130				151			151
PCB131				151			151
PCB132 & 161				151			151
PCB133 & 142				151			151
PCB134 & 143				151			151
PCB135				151			151
PCB136				151			151
PCB137				151			151
PCB138 & 163 & 164				151			151
PCB139 & 149				151			151
PCB140				151			151
PCB141				151			151
PCB144				151			151
PCB145				151			151
PCB146 & 165				151			151
PCB147				151			151
PCB148				151			151
PCB150				151			151
PCB151				151			151
PCB152				151			151
PCB153				151			151
PCB154				151			151
PCB155				151			151
PCB156				151			151
PCB157				151			151
PCB158 & 160				151			151
PCB159				151			151
PCB166				151			151
PCB167				151			151
PCB168				151			151
PCB169				151			151
PCB170				151			151
PCB171				151			151
PCB172				151			151
PCB173				151			151
PCB174				151			151
PCB175				151			151
PCB176				151			151
PCB177				151			151
PCB178				151			151
PCB179				151			151
PCB180				151			151
PCB181				151			151
PCB182 & 187				151			151
PCB183				151			151
PCB184				151			151
PCB185				151			151
PCB186				151			151
PCB188				151			151
PCB189				151			151
PCB190				151			151
PCB191				151			151
PCB192				151			151
PCB193				151			151
PCB194				151			151

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB195				151			151
PCB196 & 203				151			151
PCB197				151			151
PCB198				151			151
PCB199				151			151
PCB200				151			151
PCB201				151			151
PCB202				151			151
PCB204				151			151
PCB205				151			151
PCB206				151			151
PCB207				151			151
PCB208				151			151
PCB209				151			151
Total PCB Congeners				151			151
PCB Homologs							
Dichlorobiphenyl homologs				151			151
Heptachlorobiphenyl homologs				151			151
Hexachlorobiphenyl homologs				151			151
Monochlorobiphenyl homologs				151			151
Nonachlorobiphenyl homologs				151			151
Octachlorobiphenyl homologs				151			151
Pentachlorobiphenyl homologs				151			151
Tetrachlorobiphenyl homologs				151			151
Trichlorobiphenyl homologs				151			151
PCDD/F Homologs							
Heptachlorodibenzofuran homologs	17	29		305		3	354
Heptachlorodibenzo-p-dioxin homologs	17	29		305		3	354
Hexachlorodibenzofuran homologs	17	29		306		3	355
Hexachlorodibenzo-p-dioxin homologs	17	29		305		3	354
Octachlorodibenzofuran	17	38		310		3	368
Octachlorodibenzo-p-dioxin	17	38		310		3	368
Pentachlorodibenzofuran homologs	17	29		306		3	355
Pentachlorodibenzo-p-dioxin homologs	17	29		306		3	355
Tetrachlorodibenzofuran homologs	17	29		305		3	354
Tetrachlorodibenzo-p-dioxin homologs	17	29		305		3	354
Total PCDD/F	17	38		306		3	364
PCDD/Fs							
1,2,3,4,6,7,8-Heptachlorodibenzofuran	17	38		310		3	368
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	17	38		310		3	368
1,2,3,4,7,8,9-Heptachlorodibenzofuran	17	38		310		3	368
1,2,3,4,7,8-Hexachlorodibenzofuran	17	38		309		3	367
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	17	38		310		3	368
1,2,3,6,7,8-Hexachlorodibenzofuran	17	38		310		3	368
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	17	38		309		3	367
1,2,3,7,8,9-Hexachlorodibenzofuran	17	38		310		3	368
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	17	38		310		3	368
1,2,3,7,8-Pentachlorodibenzofuran	17	38		310		3	368
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	17	38		310		3	368
2,3,4,6,7,8-Hexachlorodibenzofuran	17	38		310		3	368
2,3,4,7,8-Pentachlorodibenzofuran	17	38		310		3	368
2,3,7,8-Tetrachlorodibenzofuran	17	38		309		3	367
2,3,7,8-Tetrachlorodibenzo-p-dioxin	17	38		310		3	368
TCDD TEQ (ND = 0)	17	38		310		3	368
Total TCDD TEQ (ND = 0)	17	38		405		3	463
Pesticides							
2,4'-DDD	17	87	14	1,551		3	1,672
2,4'-DDE	17	87	14	1,551		3	1,672
2,4'-DDT	17	87	14	1,551		3	1,672
4,4'-DDD	33	87	14	1,781	66	3	1,984
4,4'-DDE	33	87	14	1,781	66	3	1,984
4,4'-DDT	33	87	14	1,780	66	3	1,983
Aldrin	33	87	14	1,244	47	3	1,428
alpha-Endosulfan	28	87	14	1,175	33	3	1,340
alpha-Hexachlorocyclohexane	28	87	14	1,166	33	3	1,331
Atrazine				20			

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Azinphosmethyl				2			2
beta-Endosulfan	28	87	14	1,175	33	3	1,340
beta-Hexachlorocyclohexane	28	87	14	1,175	33	3	1,340
Chlordane (cis & trans)				72			72
Chlordane (technical)		16		42			58
Chloryrifos				2			2
cis-Chlordane	24	87	14	1,200	47	3	1,375
cis-Nonachlor	17	87	14	991		3	1,112
Coumaphos				2			2
delta-Hexachlorocyclohexane	28	87	14	1,172	33	3	1,337
Demeton				2			2
Diazinon				2			2
Dichlorvos				2			2
Dieldrin	33	87	14	1,244	47	3	1,428
Dimethoate				2			2
Disulfoton				2			2
Endosulfan sulfate	28	87	14	1,175	33	3	1,340
Endrin	28	87	14	1,190	33	3	1,355
Endrin aldehyde	28	87	14	1,175	33	3	1,340
Endrin ketone	19	87	14	1,150	33	3	1,306
EPN				2			2
Ethoprop				2			2
Fensulfothion				2			2
Fenthion				2			2
gamma-Hexachlorocyclohexane (Lindane)	33	87	14	1,244	47	3	1,428
Heptachlor	33	87	14	1,244	47	3	1,428
Heptachlor epoxide	28	87	14	1,181	33	3	1,346
Hexachlorocyclohexanes				9			9
Malathion				2			2
Methoxychlor	28	87	14	1,181	33	3	1,346
Methyl parathion				2			2
Mevinphos				2			2
Mirex	17	87	14	983		3	1,104
Oxychlordane	17	87	14	991		3	1,112
Parathion				2			2
Phorate				2			2
Prothiophos				2			2
Ronnel				2			2
Sulprofos				2			2
Tetrachlorvinphos				2			2
Total Chlordanes	33	87	14	1,224	47	3	1,408
Total Endosulfan	28	87	14	1,181	33	3	1,346
Total DDD	33	87	14	1,781	66	3	1,984
Total DDX	33	87	14	1,780	66	3	1,983
Total DDE	33	87	14	1,781	66	3	1,984
Total DDT	33	87	14	1,780	66	3	1,983
Total 4,4'-DDX	33	19		1,125	52		1,229
Toxaphene	28	87	14	1,181	33	3	1,346
Toxaphene Peak 1				14			
Toxaphene Peak 2				14			
Toxaphene Peak 3				14			
Toxaphene Peak 4				14			
Toxaphene Peak 5				14			
trans-Chlordane	24	87	14	1,180	33	3	1,341
trans-Nonachlor	17	87	14	991		3	1,112
Trichloronate				2			2
Herbicides							
2,4,5-T					186		186
2,4-D					186		186
2,4-DB					186		186
Dalapon					186		186
Dicamba					186		186
Dichloroprop					186		186
Dinoseb					186		186
MCPA					186		186
CPP					186		186
Silvex					186		186

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PAHs							
1,6,7-Trimethylnaphthalene				242			242
1-Methylnaphthalene	90	14	567		3		674
1-Methylphenanthrene			242				242
2,6-Dimethylnaphthalene			242				242
2-Methylnaphthalene	31	157	14	1,753	70	3	2,028
Acenaphthene	33	157	14	1,824	70	3	2,101
Acenaphthylene	33	157	14	1,821	70	3	2,098
Anthracene	33	157	14	1,821	70	3	2,098
Benzo(a)anthracene	33	157	14	1,824	70	3	2,101
Benzo(a)pyrene	33	157	14	1,824	70	3	2,101
Benzo(b)fluoranthene	33	157	14	1,824	70	3	2,101
Benzo(b+k)fluoranthene	16			510	56		582
Benzo(e)pyrene		114		393		3	510
Benzo(g,h,i)perylene	33	157	14	1,824	70	3	2,101
Benzo(k)fluoranthene	33	157	14	1,824	70	3	2,101
C1-Chrysene		90		184		3	277
C1-Dibenzothiophene		32		184		3	219
C1-Fluoranthene/pyrene	90			184		3	277
C1-Fluorene		90		184		3	277
C1-Naphthalene				33			33
C1-Phenanthrene/anthracene		90		184		3	277
C2-Chrysene		90		184		3	277
C2-Dibenzothiophene		32		184		3	219
C2-Fluoranthene/pyrene	32			151		3	186
C2-Fluorene		90		184		3	277
C2-Naphthalene		90		184		3	277
C2-Phenanthrene/anthracene		90		184		3	277
C3-Chrysene		90		184		3	277
C3-Dibenzothiophene		32		184		3	219
C3-Fluoranthene/pyrene	32			151		3	186
C3-Fluorene		90		184		3	277
C3-Naphthalene		90		184		3	277
C3-Phenanthrene/anthracene		90		184		3	277
C4-Chrysene		90		184		3	277
C4-Dibenzothiophene				11			
C4-Naphthalene		90		184		3	277
C4-Phenanthrene/anthracene		90		184		3	277
Chrysene	33	157	14	1,824	70	3	2,101
Dibenz(a,h)anthracene	33	157	14	1,823	70	3	2,100
Dibenzothiophene		90	14	263		3	370
Fluoranthene	33	157	14	1,824	70	3	2,101
Fluorene	33	157	14	1,821	70	3	2,098
High Molecular Weight PAH	33	157	14	1,824	70	3	2,101
Indeno(1,2,3-cd)pyrene	33	157	14	1,824	70	3	2,101
Low Molecular Weight PAH	33	157	14	1,824	70	3	2,101
Naphthalene	34	158	14	1,864	70	3	2,143
Perylene		114		393		3	510
Phenanthrene	33	157	14	1,824	70	3	2,101
Pyrene	33	157	14	1,824	70	3	2,101
Total cPAHs	33	157	14	1,824	70	3	2,101
Total PAHs	33	157	14	1,824	70	3	2,101
Phthalates							
Bis(2-ethylhexyl) phthalate	24	63	14	1,635	70	3	1,809
Butylbenzyl phthalate	24	63	14	1,635	70	3	1,809
Dibutyl phthalate	24	63	14	1,635	70	3	1,809
Diethyl phthalate	24	63	14	1,629	70	3	1,803
Dimethyl phthalate	24	63	14	1,635	70	3	1,809
Di-n-octyl phthalate	24	63	14	1,629	70	3	1,803
SVOCs							
1,2,4-Trichlorobenzene	22	63	14	1,350	70	3	1,522
1,2-Dichlorobenzene	24	63	14	1,376	66	3	1,546
1,2-Diphenylhydrazine				20			
1,3-Dichlorobenzene	24	63	14	1,353	52	3	1,509
1,4-Dichlorobenzene	25	64	14	1,424	66	3	1,596
2,4-Dinitrotoluene	19	63	14	1,177	37	3	1,313
2,6-Dinitrotoluene	19	63	14	1,177	37	3	1,313

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
2-Chloronaphthalene	19	63	14	1,188	37	3	1,324
2-Nitroaniline	19	63	14	1,177	37	3	1,313
3,3'-Dichlorobenzidine	19	63	14	1,177	37	3	1,313
3-Nitroaniline	19	63	14	1,177	37	3	1,313
4-Bromophenyl phenyl ether	19	63	14	1,177	37	3	1,313
4-Chloroaniline	19	63	14	1,177	37	3	1,313
4-Chlorophenyl phenyl ether	19	63	14	1,177	37	3	1,313
4-Nitroaniline	19	63	14	1,177	37	3	1,313
Acetophenone				20			
Aniline	17	55	14	1,075	37	3	1,201
Azobenzene	17	63	14	1,018		3	1,115
Benzaldehyde				20			
Benzoic acid	24	54	14	1,304	70	3	1,469
Benzyl alcohol	24	63	14	1,308	70	3	1,482
Bis(2-chloro-1-methylethyl) ether				91			91
Bis(2-chloroethoxy) methane	19	63	14	1,177	37	3	1,313
Bis(2-chloroethyl) ether	19	63	14	1,177	37	3	1,313
Bis(2-chloroisopropyl) ether	19	63	14	1,086	37	3	1,222
Caprolactam				20			
Carbazole	17	63	14	1,127		3	1,224
Dibenzofuran	33	63	14	1,486	70	3	1,669
Diphenyl				262			262
Hexachlorobenzene	24	87	14	1,336	70	3	1,534
Hexachlorobutadiene	24	87	14	1,408	70	3	1,606
Hexachlorocyclopentadiene	19	63	14	1,172	37	3	1,308
Hexachloroethane	22	71	14	1,296	56	3	1,462
Isophorone	19	63	14	1,177	37	3	1,313
Nitrobenzene	19	63	14	1,177	37	3	1,313
N-Nitrosodimethylamine	17	63	14	1,075	37	3	1,209
N-Nitrosodiphenylamine	24	63	14	1,311	70	3	1,485
N-Nitrosodipropylamine	19	63	14	1,177	37	3	1,313
Retene				11			11
Phenols							
2,3,4,5-Tetrachlorophenol	17	51	14	1,037		3	1,122
2,3,4,6-Tetrachlorophenol				34			
2,3,4,6,2,3,5,6-Tetrachlorophenol coelution				520			520
2,3,5,6-Tetrachlorophenol	17	51	14	551		3	636
2,4,5-Trichlorophenol	19	51	14	1,218	37	3	1,342
2,4,6-Trichlorophenol	19	51	14	1,218	37	3	1,342
2,4-Dichlorophenol	19	63	14	1,219	37	3	1,355
2,4-Dimethylphenol	24	119	14	1,353	70	3	1,583
2,4-Dinitrophenol	19	63	14	1,214	37	3	1,350
2-Chlorophenol	19	63	14	1,219	37	3	1,355
2-Methylphenol	24	121	14	1,353	70	3	1,585
2-Nitrophenol	19	63	14	1,210	37	3	1,346
3- and 4-Methylphenol Coelution	2			71	56		129
3-Methylphenol				20			
4,6-Dinitro-2-methylphenol	19	63	14	1,219	37	3	1,355
4-Chloro-3-methylphenol	19	63	14	1,219	37	3	1,355
4-Methylphenol	22	121	14	1,265	14	3	1,439
4-Nitrophenol	19	63	14	1,217	37	3	1,353
m,p-Cresol				14			
Pentachlorophenol	24	109	14	1,357	69	3	1,576
Phenol	24	121	14	1,353	70	3	1,585
VOCs							
1,1,1,2-Tetrachloroethane	18	20		564	26		628
1,1,1-Trichloroethane	18	20		596	26		660
1,1,2,2-Tetrachloroethane	18	20		595	26		659
1,1,2-Trichloro-1,2,2-trifluoroethane				32			32
1,1,2-Trichloroethane	18	20		596	26		660
1,1-Dichloroethane	18	20		595	26		659
1,1-Dichloroethene	18	20		595	26		659
1,1-Dichloropropene				29	26		55
1,2,3-Trichlorobenzene				55	26		81
1,2,3-Trichloropropane				564	26		628
1,2,4,5-Tetrachlorobenzene				20			
1,2,4-Trimethylbenzene				33	26		59

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
1,2-Dibromo-3-chloropropane				60	26		86
1,2-Dichloroethane	18	20		595	26		659
1,2-Dichloropropane	18	20		595	26		659
1,3,5-Trimethylbenzene				33	26		59
1,3-Dichloropropane				29	26		55
1,4-Dichloro-trans-2-butene	18	20		534			572
1,4-Dioxane				4			
1-Methyl-4-isopropylbenzene				21	26		47
2,2-Dichloropropane				29	26		55
2-Chloroethyl vinyl ether	18	20		534			572
2-Chlorotoluene				29	26		55
4-Chlorotoluene				29	26		55
Acetone	18	20		586	26		650
Acrolein	18	20		534			572
Acrylonitrile	18	20		534			572
Benzene	18	80		641	41		780
Bromobenzene				29	26		55
Bromochloromethane	18	20		588	26		652
Bromodichloromethane	18	20		595	26		659
Bromoform	18	20		595	26		659
Bromomethane	18	20		595	26		659
BTEX	18	80		655	41		794
Carbon disulfide	18	20		595	26		659
Carbon tetrachloride	18	20		595	26		659
Chlorobenzene	18	20		595	26		659
Chlorodibromomethane	18	20		595	26		659
Chloroethane	18	20		595	26		659
Chloroform	18	20		595	26		659
Chloromethane	18	20		595	26		659
cis-1,2-Dichloroethene	18	20		175	26		239
cis-1,3-Dichloropropene	18	20		596	26		660
Dichlorodifluoromethane	18	20		595	26		659
Ethylbenzene	18	80		655	41		794
Ethylene dibromide	18	20		569	26		633
Hexahydrobenzene				32			32
Isopropylbenzene	18	20		599	26		663
m,p-Xylene	18	80		642	41		781
Methyl acetate				32			32
Methyl iodide	18	20		534			572
Methyl isobutyl ketone	18	20		587	26		651
Methyl n-butyl ketone	18	20		596	26		660
Methyl tert-butyl ether	18	22		590			630
Methylcyclohexane				32			32
Methylene bromide	18	20		563	26		627
Methylene chloride	18	20		596	26		660
Methylethyl ketone	18	20		586	26		650
Methylisopropylbenzene				9			9
n-Butylbenzene				29	26		55
n-Propylbenzene				33	26		59
o-Xylene	18	80		642	41		781
Sec-butylbenzene				29	26		55
Styrene	18	20		596	26		660
tert-Butylbenzene				29	26		55
Tetrachloroethene	18	20		627	26		691
Toluene	18	80		642	41		781
trans-1,2-Dichloroethene	18	20		595	26		659
trans-1,3-Dichloropropene	18	20		596	26		660
Trichloroethene	18	20		627	41		706
Trichlorofluoromethane	18	20		596	26		660
Vinyl acetate	18	20		541			579
Vinyl chloride	18	20		596	26		660
Xylene	18	80		655	41		794
Petroleum							
C10-C12 Aliphatics		12		16			28
C10-C12 Aromatics		12		16			28
C12-C13 Aromatics		2					
C12-C16 Aliphatics		12		16			28
C12-C16 Aromatics		12		16			28

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
C16-C21 Aliphatics		12		16			28
C16-C21 Aromatics		12		16			28
C21-C34 Aliphatics		12		16			28
C21-C34 Aromatics		12		16			28
C5-C6 Aliphatics		2					
C6-C8 Aliphatics		2					
C8-C10 Aliphatics		12		16			28
C8-C10 Aromatics		12		16			28
Decane		2					
Total Petroleum Hydrocarbons (Diesel)	17	107	14	1,232	52		1,422
Total Petroleum Hydrocarbons (Diesel, silica gel treated)		56	14	270		3	343
Dodecane		2					
Total Petroleum Hydrocarbons (Gasoline)	18	93		883	19		1,013
Total Petroleum Hydrocarbons (Heavy-Oil)				31	52		83
Jet fuel A		15		1	52		68
JP-4 jet fuel				1	19		20
Kerosene		15		1	52		68
Lube oil				17	52		69
Mineral spirits		15		1	52		68
Motor oil		9		105			114
Naphtha distillate				1	19		20
Non-petroleum hydrocarbons				1	52		53
n-Hexane		2					
Octane		2					
Pencil pitch				16			16
Pentane		2					
Phytane				3			3
Pristane				3			3
Total Petroleum Hydrocarbons (Residual)	17	83	14	1,080			1,194
Total Petroleum Hydrocarbons (Residual, silica gel treated)		56	14	270		3	343
Total Petroleum Hydrocarbons	17	107	14	1,232	52		1,422
Total Petroleum Hydrocarbons (silica gel treated)		56	14	270		3	343
Radioisotopes							
Beryllium-7				108			108
Cesium-137				108			108
Lead-210				108			108
Radium-226				108			108
Surface Sediment							
Grain Size							
< 0.075 mm				55		2	57
> 0.075 mm				10		2	12
>10 Phi clay		7		150		3	160
>9 Phi clay	21	90	17	890		50	1,068
8-9 Phi clay	21	97	17	1,041		53	1,229
9-10 Phi clay		7		150		3	160
Clay		28		382	38	7	455
Coarse sand	21	110	17	1,159	14	71	1,392
Coarse silt	21	97	17	1,041		53	1,229
Fine gravel	21	101	17	973		53	1,165
Fine sand	21	110	17	1,159	14	71	1,392
Fine silt	21	97	17	1,041		53	1,229
Fines	21	134	17	1,496	38	80	1,786
Gravel		31		450	14	20	515
Mean grain size				1			1
Median grain size				1			1
Medium gravel	21	101	17	973		53	1,165
Medium sand	21	110	17	1,159	14	71	1,392
Medium silt	21	97	17	1,041		53	1,229
Sand		24		336	24	9	393
Sieve 10				49			49
Sieve 100				2			2
Sieve 140				47			47
Sieve 20				49			49
Sieve 200				49			49
Sieve 230				4			4
Sieve 4				49			49
Sieve 40				49			49

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Sieve 60				49			49
Silt		28		387	38	7	460
Very coarse sand	21	110	17	1,157	14	71	1,390
Very fine sand	21	110	17	1,157	14	71	1,390
Very fine silt	21	97	17	1,041		53	1,229
Atterberg Limits							
Liquid Limit				26			26
Plastic Limit				55			55
Plasticity Index				26			26
Conventional							
Acid Volatile Sulfides	4			76			80
Ammonia		14	1	525		40	580
Cyanide		12		43			55
Moisture				2		2	4
Oxidation-Reduction Potential				2			2
Perchlorate				13			13
pH				2			2
Phosphorus		4					4
Specific Gravity	17	10	15	807		27	876
Sulfide		25	1	528		40	594
Total organic carbon	25	201	17	1,715	40	77	2,075
Total solids	25	200	17	1,499	40	74	1,855
Total volatile solids				191		22	213
Metals							
Aluminum	21	139	17	1,278		63	1,518
Antimony	21	247	17	1,453	40	72	1,850
Arsenic	25	231	17	1,629	40	77	2,019
Arsenic pentavalent				11			11
Arsenic trivalent				11			11
Barium		36		259		10	305
Beryllium		44		260		10	314
Cadmium	25	267	17	1,593	40	72	2,014
Calcium				155		1	156
Chromium	25	263	17	1,580	14	66	1,965
Chromium hexavalent			1	67			68
Cobalt				155		10	165
Copper	25	267	17	1,601	40	72	2,022
Iron		12		174			186
Lead	25	267	17	1,624	40	72	2,045
Magnesium				155			155
Manganese	4	5		307		10	326
Mercury	25	261	17	1,571	40	72	1,986
Methylmercury				5			5
Nickel	25	242	17	1,559	40	72	1,955
Potassium				155			155
Selenium	21	147	7	1,236		36	1,447
Silver	25	201	17	1,555	40	72	1,910
Sodium				155			155
Thallium	4	17		278		10	309
Tin				16			16
Titanium				75			75
Vanadium				155		10	165
Zinc	25	267	17	1,630	40	72	2,051
Butyltins							
Butyltin ion	4	161	1	313	14	8	501
Dibutyltin dichloride				5			5
Dibutyltin ion	4	161	1	313	14	8	501
Monobutyltin trichloride				5			5
Tetrabutyltin	4	182	1	318	14	8	527
Tributyltin		17		8			25
Tributyltin chloride				5			5
Tributyltin ion	4	173	1	354	14	8	554
PBDE Congeners							
PBDE028	5	3	1	78	10	3	100
PBDE047	5	3	1	78	10	3	100
PBDE099	5	3	1	78	10	3	100

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PBDE100	5	3	1	78	10	3	100
PBDE153	5	3	1	78	10	3	100
PBDE154	5	3	1	78	10	3	100
PBDE183	5	3	1	78	10	3	100
PBDE209	5	3	1	78	10	3	100
PCB Aroclors							
Aroclor 1016	25	256	17	1,286	40	81	1,705
Aroclor 1221	25	256	17	1,285	40	81	1,704
Aroclor 1232	25	256	17	1,285	40	81	1,704
Aroclor 1242	25	256	17	1,286	40	81	1,705
Aroclor 1248	25	256	17	1,286	40	81	1,705
Aroclor 1254	25	256	17	1,286	40	81	1,705
Aroclor 1260	25	256	17	1,286	40	81	1,705
Aroclor 1262	21	154	17	990		63	1,245
Aroclor 1268	21	154	17	990		63	1,245
Aroclors	25	256	17	1,287	40	81	1,706
PCB Congeners							
Total PCB TEQ (ND = 0)	4	8	2	269		26	309
PCB001	4	8	1	257		26	296
PCB002	4	8	1	257		26	296
PCB003	4	8	1	257		26	296
PCB004		3		11		10	24
PCB004 & 010	4	5	1	246		16	272
PCB005		3		11		10	24
PCB005 & 008	4	5	1	246		16	272
PCB006	4	8	1	257		26	296
PCB007		3		11		10	24
PCB007 & 009	4	5	1	246		16	272
PCB008		3		90		10	103
PCB009		3		11		10	24
PCB010		3		11		10	24
PCB011	4	8	1	257		26	296
PCB012						10	10
PCB012 & 013	4	8	1	257		16	286
PCB013						10	10
PCB014	4	8	1	257		26	296
PCB015	4	8	1	257		26	296
PCB016		3		11		10	24
PCB016 & 032	4	5	1	246		16	272
PCB017	4	8	1	257		26	296
PCB018	4	5	1	325		26	361
PCB018 & 030		3		11			14
PCB019	4	8	1	257		26	296
PCB020		3				10	13
PCB020 & 021 & 033	4	5	1	246		16	272
PCB020 & 028		3		11			14
PCB021						10	10
PCB021 & 033		3		11			14
PCB022	4	8	1	257		26	296
PCB023	4	8	1	257		26	296
PCB024		3		11		10	24
PCB024 & 027	4	5	1	246		16	272
PCB025	4	8	1	257		26	296
PCB026	4	5	1	246		26	282
PCB026 & 029		3		11			14
PCB027		3		11		10	24
PCB028	4	5	1	325		26	361
PCB029	4	5	1	246		26	282
PCB030	4	5	1	246		26	282
PCB031	4	8	1	257		26	296
PCB032		3		11		10	24
PCB033						10	10
PCB034	4	8	1	257		26	296
PCB035	4	8	1	257		26	296
PCB036	4	8	1	257		26	296
PCB037	4	8	1	257		26	296
PCB038	4	8	1	257		26	296

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB039	4	8	1	257	26	296	
PCB040	4	5	1	246	26	282	
PCB040 & 041 & 071		3		11		14	
PCB041					10	10	
PCB041 & 064 & 071 & 072	4	5	1	246	16	272	
PCB042		3		11	10	24	
PCB042 & 059	4	5	1	246	16	272	
PCB043				11	10	21	
PCB043 & 049	4	5	1	246	16	272	
PCB043 & 073		3					
PCB044	4	5	1	325	26	361	
PCB044 & 047 & 065		3		11		14	
PCB045	4	5	1	246	26	282	
PCB045 & 051		3		11		14	
PCB046	4	8	1	257	26	296	
PCB047	4	5	1	246	26	282	
PCB048		3		11	10	24	
PCB048 & 075	4	5	1	246	16	272	
PCB049					10	10	
PCB049 & 069		3		11		14	
PCB050	4	5	1	246	26	282	
PCB050 & 053		3		11		14	
PCB051	4	5	1	246	26	282	
PCB052		3		90	10	103	
PCB052 & 069	4	5	1	246	16	272	
PCB053	4	5	1	246	26	282	
PCB054	4	8	1	257	26	296	
PCB055	4	8	1	257	26	296	
PCB056		3		11	10	24	
PCB056 & 060	4	5	1	246	16	272	
PCB057	4	8	1	257	26	296	
PCB058	4	8	1	257	26	296	
PCB059					10	10	
PCB059 & 062 & 075		3		11		14	
PCB060		3		11	10	24	
PCB061					10	10	
PCB061 & 070	4	5	1	246	16	272	
PCB061 & 070 & 074 & 076		3		11		14	
PCB062	4	5	1	246	26	282	
PCB063	4	8	1	257	26	296	
PCB064		3		11	10	24	
PCB065	4	5	1	246	26	282	
PCB066		3		90	10	103	
PCB066 & 076	4	5	1	246	16	272	
PCB067	4	8	1	257	26	296	
PCB068	4	8	1	257	26	296	
PCB069					10	10	
PCB070					10	10	
PCB071					10	10	
PCB072		3		11	10	24	
PCB073	4	5	1	257	26	293	
PCB074	4	5	1	246	26	282	
PCB075					10	10	
PCB076					10	10	
PCB077	4	8	2	269	26	309	
PCB078	4	8	1	257	26	296	
PCB079	4	8	1	257	26	296	
PCB080	4	8	1	257	26	296	
PCB081	4	8	2	269	26	309	
PCB082	4	8	1	257	26	296	
PCB083	4	5	1	246	26	282	
PCB083 & 099		3		11		14	
PCB084		3		11	10	24	
PCB084 & 092	4	5	1	246	16	272	
PCB085					10	10	
PCB085 & 116	4	8	1	246	16	275	
PCB085 & 116 & 117				11		11	
PCB086	4	5	1	246	26	282	

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB086 & 087 & 097 & 108 & 119 & 125		3		11		10	14
PCB087						10	10
PCB087 & 117 & 125	4	5	1	246		16	272
PCB088						10	10
PCB088 & 091	4	8	1	257		16	286
PCB089	4	8	1	257		26	296
PCB090						10	10
PCB090 & 101	4	5	1	246		16	272
PCB090 & 101 & 113		3		11			14
PCB091						10	10
PCB092		3		11		10	24
PCB093	4	5	1	246		26	282
PCB093 & 100		3					
PCB093 & 095 & 098 & 100 & 102				11			11
PCB094	4	8	1	257		26	296
PCB095		3				10	13
PCB095 & 098 & 102	4	5	1	246		16	272
PCB096	4	8	1	257		26	296
PCB097	4	5	1	246		26	282
PCB098						10	10
PCB098 & 102		3					
PCB099	4	5	1	246		26	282
PCB100	4	5	1	246		26	282
PCB101				79		10	89
PCB102						10	10
PCB103	4	8	1	257		26	296
PCB104	4	8	1	257		26	296
PCB105	4	8	2	348		26	388
PCB106		3		11		10	24
PCB106 & 118	4	5	2	258		16	285
PCB107		3				10	13
PCB107 & 109	4	5	1	246		16	272
PCB107 & 124				11			11
PCB108						10	10
PCB108 & 112	4	5	1	246		16	272
PCB108 & 124		3					
PCB109				11		10	21
PCB110	4	5	1	246		26	282
PCB110 & 115		3		11			14
PCB111		3		11		10	24
PCB111 & 115	4	5	1	246		16	272
PCB112		3		11		10	24
PCB113	4	5	1	246		26	282
PCB114	4	8	2	269		26	309
PCB115						10	10
PCB116						10	10
PCB117		3				10	13
PCB118		3		90		10	103
PCB119	4	5	1	246		26	282
PCB120	4	8	1	257		26	296
PCB121	4	8	1	257		26	296
PCB122	4	8	1	257		26	296
PCB123	4	8	2	269		26	309
PCB124	4	5	1	246		26	282
PCB125						10	10
PCB126	4	8	2	269		26	309
PCB127	4	8	1	257		26	296
PCB128				79			79
PCB128 & 162	4	5	1	246		16	272
PCB128 & 166		3		11			14
PCB129	4	5	1	246		26	282
PCB129 & 138 & 160 & 163				11			11
PCB129 & 138 & 163		3					
PCB130	4	8	1	257		26	296
PCB131	4	8	1	257		26	296
PCB132		3		11		10	24
PCB132 & 161	4	5	1	246		16	272
PCB133		3		11		10	24

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB133 & 142	4	5	1	246		16	272
PCB134		3				10	13
PCB134 & 143	4	5	1	257		16	283
PCB135	4	5	1	246		26	282
PCB135 & 151		3			11		11
PCB135 & 151 & 154					11		
PCB136	4	8	1	257		26	296
PCB137	4	8	1	257		26	296
PCB138				79		10	89
PCB138 & 163 & 164	4	5	1	246		16	272
PCB139						10	10
PCB139 & 140		3		11			14
PCB139 & 149	4	5	1	246		16	272
PCB140	4	5	1	246		26	282
PCB141	4	8	1	257		26	296
PCB142		3		11		10	24
PCB143		3				10	13
PCB144	4	8	1	257		26	296
PCB145	4	8	1	257		26	296
PCB146		3		11		10	24
PCB146 & 165	4	5	1	246		16	272
PCB147	4	5	1	246		26	282
PCB147 & 149		3		11			14
PCB148	4	8	1	257		26	296
PCB149						10	10
PCB150	4	8	1	257		26	296
PCB151	4	5	1	246		26	282
PCB152	4	8	1	257		26	296
PCB153	4	5	1	325		26	361
PCB153 & 168		3		11			14
PCB154	4	8	1	246		26	285
PCB155	4	8	1	256		26	295
PCB156	4	5	2	269		26	306
PCB156 & 157		3					
PCB157	4	5	2	269		26	306
PCB158		3		11		10	24
PCB158 & 160	4	5	1	246		16	272
PCB159	4	8	1	257		26	296
PCB160		3				10	13
PCB161		3		11		10	24
PCB162		3		11		10	24
PCB163						10	10
PCB164		3		11		10	24
PCB165		3		11		10	24
PCB166	4	5	1	246		26	282
PCB167	4	8	2	269		26	309
PCB168	4	5	1	246		26	282
PCB169	4	8	2	269		26	309
PCB170	4	8	1	336		26	375
PCB171	4	5	1	246		26	282
PCB171 & 173		3		11			14
PCB172	4	8	1	257		26	296
PCB173	4	5	1	246		26	282
PCB174	4	8	1	257		26	296
PCB175	4	8	1	257		26	296
PCB176	4	8	1	257		26	296
PCB177	4	8	1	257		26	296
PCB178	4	8	1	257		26	296
PCB179	4	8	1	257		26	296
PCB180	4	5	1	325		26	361
PCB180 & 193		3		11			14
PCB181	4	8	1	257		26	296
PCB182		3		11		10	24
PCB182 & 187	4	5	1	246		16	272
PCB183	4	8	1	246		26	285
PCB183 & 185				11			11
PCB184	4	8	1	257		26	296
PCB185	4	8	1	246		26	285

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
PCB186	4	8	1	257	26	296	
PCB187		3		90	10	103	
PCB188	4	8	1	257	26	296	
PCB189	4	8	2	269	26	309	
PCB190	4	8	1	257	26	296	
PCB191	4	8	1	257	26	296	
PCB192	4	8	1	257	26	296	
PCB193	4	5	1	246	26	282	
PCB194	4	8	1	257	26	296	
PCB195	4	8	1	257	26	296	
PCB196		3		11	10	24	
PCB196 & 203	4	5	1	246	16	272	
PCB197	4	8	1	246	26	285	
PCB197 & 200				11		11	
PCB198	4	5	1	246	26	282	
PCB198 & 199		3		11		14	
PCB199	4	5	1	246	26	282	
PCB200	4	5	1	246	26	282	
PCB201	4	8	1	257	26	296	
PCB202	4	8	1	257	26	296	
PCB203		3		11	10	24	
PCB204	4	8	1	257	26	296	
PCB205	4	8	1	257	26	296	
PCB206	4	8	1	257	26	296	
PCB207	4	8	1	257	26	296	
PCB208	4	8	1	257	26	296	
PCB209	4	8	1	257	26	296	
Total PCB Congeners	4	8	1	257	26	296	
PCB Homologs							
Dichlorobiphenyl homologs	4	8	1	257	26	296	
Heptachlorobiphenyl homologs	4	8	1	257	26	296	
Hexachlorobiphenyl homologs	4	8	1	257	26	296	
Monochlorobiphenyl homologs	4	8	1	257	26	296	
Nonachlorobiphenyl homologs	4	8	1	257	26	296	
Octachlorobiphenyl homologs	4	8	1	257	26	296	
Pentachlorobiphenyl homologs	4	8	1	257	26	296	
Tetrachlorobiphenyl homologs	4	8	1	257	26	296	
Trichlorobiphenyl homologs	4	8	1	257	26	296	
PCDD/F Homologs							
Heptachlorodibenzofuran homologs	21	52	2	232	39	346	
Heptachlorodibenzo-p-dioxin homologs	21	52	2	232	39	346	
Hexachlorodibenzofuran homologs	21	52	2	232	39	346	
Hexachlorodibenzo-p-dioxin homologs	21	52	2	232	39	346	
Octachlorodibenzofuran	21	62	2	235	48	368	
Octachlorodibenzo-p-dioxin	21	62	2	235	49	369	
Pentachlorodibenzofuran homologs	21	52	2	232	39	346	
Pentachlorodibenzo-p-dioxin homologs	21	52	2	232	39	346	
Tetrachlorodibenzofuran homologs	21	52	2	232	39	346	
Tetrachlorodibenzo-p-dioxin homologs	21	52	2	231	39	345	
Total PCDD/F	21	62	2	232	39	356	
PCDD/Fs							
1,2,3,4,6,7,8-Heptachlorodibenzofuran	21	62	2	235	49	369	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	21	62	2	235	49	369	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	21	62	2	235	49	369	
1,2,3,4,7,8-Hexachlorodibenzofuran	21	62	2	235	49	369	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	21	62	2	235	49	369	
1,2,3,6,7,8-Hexachlorodibenzofuran	21	62	2	235	49	369	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	21	62	2	235	49	369	
1,2,3,7,8,9-Hexachlorodibenzofuran	21	62	2	235	49	369	
1,2,3,7,8-Pentachlorodibenzofuran	21	62	2	235	49	369	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	21	62	2	235	49	369	
2,3,4,6,7,8-Hexachlorodibenzofuran	21	62	2	235	49	369	
2,3,4,7,8-Pentachlorodibenzofuran	21	62	2	235	49	369	
2,3,7,8-Tetrachlorodibenzofuran	21	62	2	235	49	369	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	21	62	2	235	49	369	
TCDD TEQ (ND = 0)	21	62	2	235	49	369	

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Total TCDD TEQ (ND = 0)	21	65	2	383		54	525
Pesticides							
2,4'-DDD	21	139	17	1,122		63	1,362
2,4'-DDE	21	139	17	1,121		63	1,361
2,4'-DDT	21	139	17	1,122		63	1,362
4,4'-DDD	25	145	17	1,269	40	81	1,577
4,4'-DDE	25	145	17	1,267	40	81	1,575
4,4'-DDT	25	145	17	1,269	40	81	1,577
Aldrin	25	141	17	1,205	14	77	1,479
alpha-Endosulfan	25	141	17	1,194	14	75	1,466
alpha-Hexachlorocyclohexane	25	141	17	1,185	14	75	1,457
beta-Endosulfan	25	141	17	1,194	14	75	1,466
beta-Hexachlorocyclohexane	25	141	17	1,194	14	75	1,466
Chlordane (cis & trans)				191		3	194
Chlordane (technical)		22		10			32
cis-Chlordane	21	141	17	1,180	14	77	1,450
cis-Nonachlor	21	139	17	1,059		63	1,299
delta-Hexachlorocyclohexane	25	141	17	1,192	14	75	1,464
Die�drin	25	141	17	1,205	14	77	1,479
Endosulfan sulfate	25	141	17	1,193	14	75	1,465
Endrin	25	141	17	1,197	14	75	1,469
Endrin aldehyde	25	141	17	1,194	14	75	1,466
Endrin ketone	21	141	17	1,180	14	75	1,448
gamma-Hexachlorocyclohexane (Lindane)	25	141	17	1,205	14	77	1,479
Heptachlor	25	141	17	1,205	14	77	1,479
Heptachlor epoxide	25	141	17	1,194	14	75	1,466
Hexachlorocyclohexanes				9			9
Methoxychlor	25	141	17	1,194	14	75	1,466
Mirex	21	139	17	965		63	1,205
Oxychlordane	21	139	17	1,060		63	1,300
Total Chlordanes	25	141	17	1,203	14	77	1,477
Total Endosulfan	25	141	17	1,193	14	75	1,465
Total DDD	25	145	17	1,269	40	81	1,577
Total DDx	25	145	17	1,269	40	81	1,577
Total DDE	25	145	17	1,267	40	81	1,575
Total DDT	25	145	17	1,269	40	81	1,577
Total 4,4'-DDx	21	12	7	1,026	40	39	1,145
Toxaphene	25	141	17	1,193	14	75	1,465
trans-Chlordane	21	141	17	1,182	14	77	1,452
trans-Nonachlor	21	139	17	1,059		63	1,299
Herbicides							
2,4,5-T			1	221		3	225
2,4-D			1	221		3	225
2,4-DB			1	221		3	225
Dalapon			1	221		3	225
Dicamba			1	221		3	225
Dichloroprop			1	221		3	225
Dinoseb			1	221		3	225
MCPA			1	221		3	225
CPP			1	221		3	225
Silvex			1	221		3	225
PAHs							
1,6,7-Trimethylnaphthalene				56			56
1-Methylnaphthalene	4	111	10	277		32	434
1-Methylphenanthrene				56			56
2,6-Dimethylnaphthalene				56			56
2-Methylnaphthalene	25	192	17	1,536	40	71	1,881
Acenaphthene	25	268	17	1,756	40	78	2,184
Acenaphthylene	25	268	17	1,756	40	77	2,183
Anthracene	25	268	17	1,756	40	78	2,184
Benzo(a)anthracene	25	268	17	1,756	40	78	2,184
Benzo(a)pyrene	25	268	17	1,756	40	78	2,184
Benzo(b)fluoranthene	25	268	17	1,660	40	78	2,088
Benzo(b+k)fluoranthene	4	6		669	40	18	737
Benzo(e)pyrene	4	144	10	297		32	487
Benzo(g,h,i)perylene	25	268	17	1,756	40	77	2,183
Benzo(j+k)fluoranthene				35			35

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Benz(k)fluoranthene	25	268	17	1,625	40	78	2,053
Benzofluoranthenes				35			35
C1-Chrysene	4	111	10	268		32	425
C1-Dibenzothiophene	4	99	10	268		32	413
C1-Fluoranthene/pyrene	4	111	10	268		32	425
C1-Fluorene	4	111	10	268		32	425
C1-Naphthalene				62			62
C1-Phenanthrene/anthracene	4	111	10	268		32	425
C2-Chrysene	4	111	10	268		32	425
C2-Dibenzothiophene	4	99	10	268		32	413
C2-Fluoranthene/pyrene	4	99	10	241		32	386
C2-Fluorene	4	111	10	268		32	425
C2-Naphthalene	4	111	10	268		32	425
C2-Phenanthrene/anthracene	4	111	10	268		32	425
C3-Chrysene	4	111	10	268		32	425
C3-Dibenzothiophene	4	99	10	268		32	413
C3-Fluoranthene/pyrene	4	99	10	241		32	386
C3-Fluorene	4	111	10	268		32	425
C3-Naphthalene	4	111	10	268		32	425
C3-Phenanthrene/anthracene	4	111	10	268		32	425
C4-Chrysene	4	111	10	268		32	425
C4-Dibenzothiophene				35			35
C4-Naphthalene	4	111	10	268		32	425
C4-Phenanthrene/anthracene	4	111	10	268		32	425
Chrysene	25	268	17	1,756	40	78	2,184
Dibenzo(a,h)anthracene	25	268	17	1,756	40	78	2,184
Dibenzothiophene	4	111	10	268		32	425
Fluoranthene	25	268	17	1,767	40	78	2,195
Fluorene	25	268	17	1,756	40	78	2,184
High Molecular Weight PAH	25	268	17	1,756	40	78	2,184
Indeno(1,2,3-cd)pyrene	25	268	17	1,756	40	78	2,184
Low Molecular Weight PAH	25	268	17	1,756	40	78	2,184
Naphthalene	25	268	17	1,761	40	78	2,189
Perylene	4	144	10	297		32	487
Phenanthrene	25	268	17	1,756	40	77	2,183
Pyrene	25	268	17	1,756	40	78	2,184
Total cPAHs	25	268	17	1,756	40	78	2,184
Total PAHs	25	268	17	1,756	40	78	2,184
Phthalates							
Bis(2-ethylhexyl) phthalate	21	95	17	1,552	40	72	1,797
Butylbenzyl phthalate	21	95	17	1,543	40	72	1,788
Dibutyl phthalate	21	95	17	1,542	40	72	1,787
Diethyl phthalate	21	95	17	1,538	40	72	1,783
Dimethyl phthalate	21	95	17	1,543	40	72	1,788
Di-n-octyl phthalate	21	95	17	1,538	40	72	1,783
SVOCs							
1,2,4-Trichlorobenzene	21	95	17	1,366	40	72	1,611
1,2-Dichlorobenzene	21	95	17	1,427	40	72	1,672
1,2-Diphenylhydrazine					10		10
1,3-Dichlorobenzene	21	95	17	1,424	40	72	1,669
1,4-Dichlorobenzene	21	95	17	1,432	40	72	1,677
2,4-Dinitrotoluene	21	91	17	1,325	14	63	1,531
2,6-Dinitrotoluene	21	91	17	1,325	14	63	1,531
2-Chloronaphthalene	21	106	17	1,325	14	63	1,546
2-Nitroaniline	21	91	17	1,325	14	63	1,531
3,3'-Dichlorobenzidine	21	91	17	1,325	14	63	1,531
3-Nitroaniline	21	91	17	1,325	14	63	1,531
4-Bromophenyl phenyl ether	21	91	17	1,325	14	63	1,531
4-Chloroaniline	21	91	17	1,325	14	63	1,531
4-Chlorophenyl phenyl ether	21	91	17	1,325	14	63	1,531
4-Nitroaniline	21	91	17	1,325	14	63	1,531
Aniline	21	91	17	1,120	14	63	1,326
Azobenzene	21	89	17	1,002		53	1,182
Benzoic acid	21	93	17	1,394	38	72	1,635
Benzyl alcohol	21	95	17	1,397	40	72	1,642
Bis(2-chloro-1-methylethyl) ether		2		233	2	10	247
Bis(2-chloroethoxy) methane	21	91	17	1,325	14	63	1,531

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Bis(2-chloroethyl) ether	21	91	17	1,325	14	63	1,531
Bis(2-chloroisopropyl) ether	21	89	17	1,092	12	53	1,284
Carbazole	21	89	17	1,306		63	1,496
Dibenzofuran	25	109	17	1,534	40	72	1,797
Diphenyl				91			91
Hexachlorobenzene	21	145	17	1,420	40	72	1,715
Hexachlorobutadiene	21	145	17	1,451	40	72	1,746
Hexachlorocyclopentadiene	21	91	17	1,319	14	63	1,525
Hexachloroethane	21	123	17	1,374	40	72	1,647
Isophorone	21	91	17	1,325	14	63	1,531
Nitrobenzene	21	91	17	1,325	14	63	1,531
N-Nitrosodimethylamine	21	91	17	1,137	14	63	1,343
N-Nitrosodiphenylamine	21	95	17	1,399	40	72	1,644
N-Nitrosodipropylamine	21	91	17	1,325	14	63	1,531
Pyridine				1			1
Phenols							
2,3,4,5-Tetrachlorophenol	21	89	17	1,024		63	1,214
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution			6	568		18	592
2,3,4,6-Tetrachlorophenol				149		10	159
2,3,5,6-Tetrachlorophenol	21	89	11	535		35	691
2,4,5-Trichlorophenol	21	91	17	1,381	14	63	1,587
2,4,6-Trichlorophenol	21	91	17	1,381	14	63	1,587
2,4-Dichlorophenol	21	89	17	1,398	14	63	1,602
2,4-Dimethylphenol	21	37	17	1,464	38	67	1,644
2,4-Dinitrophenol	21	89	17	1,360	14	63	1,564
2-Chlorophenol	21	89	17	1,381	14	63	1,585
2-Methylphenol	21	105	17	1,455	38	72	1,708
2-Nitrophenol	21	89	17	1,372	14	63	1,576
3- and 4-Methylphenol Coelution		4		42	24	7	77
3,4-Dichlorophenol	1	5		7			13
3,5-Dichlorophenol	1	5		7			13
4,6-Dinitro-2-methylphenol	21	89	17	1,380	14	63	1,584
4-Chloro-3-methylphenol	21	89	17	1,381	14	63	1,585
4-Methylphenol	21	101	17	1,418	14	65	1,636
4-Nitrophenol	21	89	17	1,378	14	63	1,582
Cresol				1			1
Pentachlorophenol	21	107	17	1,531	38	78	1,792
Phenol	21	105	17	1,455	40	72	1,710
Tetrachlorophenol				17			17
VOCs							
1,1,1,2-Tetrachloroethane	6	8	1	332	2	3	352
1,1,1-Trichloroethane	6	8	1	332	2	13	362
1,1,2,2-Tetrachloroethane	6	8	1	332	2	13	362
1,1,2-Trichloro-1,2,2-trifluoroethane				1		10	11
1,1,2-Trichloroethane	6	8	1	332	2	13	362
1,1-Dichloroethane	6	8	1	327	2	13	357
1,1-Dichloroethene	6	8	1	332	2	10	359
1,1-Dichloropropene		2		54	2		58
1,2,3-Trichlorobenzene		2		54	2	10	68
1,2,3-Trichloropropane	6	8	1	332	2	3	352
1,2,4-Trimethylbenzene		2		57	2		61
1,2-Dibromo-3-chloropropane		2		54	2	10	68
1,2-Dichloroethane	6	8	1	332	2	13	362
1,2-Dichloroethene				8			8
1,2-Dichloropropane	6	8	1	332	2	13	362
1,3,5-Trimethylbenzene		2		57	2		61
1,3-Dichloropropane		2		54	2		58
1,3-Dichloropropene				8			8
1,4-Dichloro-trans-2-butene	6	6	1	279		3	295
1,4-Dioxane						10	10
1-Methyl-4-isopropylbenzene		2		37	2		41
2,2-Dichloropropane		2		54	2		58
2-Chloroethyl vinyl ether	6	6	1	279		3	295
2-Chlorotoluene		2		54	2		58
4-Chlorotoluene		2		54	2		58
Acetone	6	8	1	332	2	13	362
Acrolein	6	6	1	279		3	295

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown Reach	Multnomah Channel	Study Area	Ross Island Lagoon ^a	Upriver	Grand Total
Acrylonitrile	6	6	1	279	28	3	295
Benzene	6	24	1	405	28	17	481
Bromobenzene		2		54	2		58
Bromochloromethane	6	8	1	332	2	13	362
Bromodichloromethane	6	8	1	332	2	13	362
Bromoethane				1			1
Bromoform	6	8	1	332	2	13	362
Bromomethane	6	8	1	332	2	13	362
BTEx	6	24	1	424	28	17	500
Butylbenzene				8			8
Carbon disulfide	6	8	1	329	2	13	359
Carbon tetrachloride	6	8	1	332	2	13	362
Chlorobenzene	6	8	1	341	2	13	371
Chlorodibromomethane	6	8	1	332	2	13	362
Chloroethane	6	8	1	335	2	13	365
Chloroform	6	8	1	332	2	13	362
Chloromethane	6	8	1	332	2	13	362
cis-1,2-Dichloroethene	6	8	1	138	2	10	165
cis-1,3-Dichloropropene	6	8	1	324	2	13	354
Dichlorodifluoromethane	6	8	1	332	2	13	362
Ethylbenzene	6	24	1	424	28	17	500
Ethylene dibromide	6	8	1	332	2	13	362
Hexahydrobenzene						10	10
Isopropylbenzene	6	8	1	335	2	13	365
m,p-Xylene	6	24	1	395	28	17	471
Methyl acetate						10	10
Methyl iodide	6	6	1	279		3	295
Methyl isobutyl ketone	6	8	1	323	2	13	353
Methyl n-butyl ketone	6	8	1	332	2	13	362
Methyl tert-butyl ether	6	6	1	306		13	332
Methylcyclohexane						10	10
Methylene bromide	6	8	1	332	2	3	352
Methylene chloride	6	8	1	332	2	13	362
Methylethyl ketone	6	8	1	323	2	13	353
Methylisopropylbenzene				17			17
n-Butylbenzene		2		46	2		50
n-Propylbenzene		2		57	2		61
o-Xylene	6	24	1	395	28	17	471
Sec-butylbenzene		2		54	2		58
Styrene	6	8	1	332	2	13	362
tert-Butylbenzene		2		51	2		55
Tetrachloroethene	6	8	1	392	2	13	422
Toluene	6	24	1	396	28	17	472
trans-1,2-Dichloroethene	6	8	1	329	2	13	359
trans-1,3-Dichloropropene	6	8	1	329	2	13	359
Trichloroethene	6	12	1	392	28	17	456
Trichlorofluoromethane	6	8	1	332	2	13	362
Vinyl acetate	6	6	1	279		3	295
Vinyl chloride	6	8	1	332	2	13	362
Xylene	6	24	1	424	28	17	500
Petroleum							
C10-C12 Aliphatics				5			5
C10-C12 Aromatics				5			5
C12-C16 Aliphatics				5			5
C12-C16 Aromatics				5			5
C16-C21 Aliphatics				5			5
C16-C21 Aromatics				5			5
C21-C34 Aliphatics				5			5
C21-C34 Aromatics				5			5
C8-C10 Aliphatics				5			5
C8-C10 Aromatics				5			5
Total Petroleum Hydrocarbons (Diesel)	17	61	11	859	26	43	1,017
Total Petroleum Hydrocarbons (Diesel, silica gel treated)		127	10	216		32	385
Fuel oil no. 2				1			1
Total Petroleum Hydrocarbons (Gasoline)	17	36	1	468	26	16	564
Total Petroleum Hydrocarbons (Heavy-Oil)		14		26	26	4	70
Jet fuel A		18		1	26	4	49
JP-4 jet fuel		14		1	26	4	45

Table 2.3-3. Summary of Sediment Sample Counts in the RI Data Set.

Analyte	Downstream	Downtown	Multnomah	Ross Island		Upriver	Grand Total
		Reach	Channel	Study Area	Lagoon^a		
Kerosene		18		1	26	4	49
Lube oil		14		143	26	4	187
Mineral spirits		18		1	26	4	49
Motor oil		22		27			49
Naphtha distillate		14		1	26	4	45
Non-petroleum hydrocarbons		14			26	4	44
Pencil pitch				44			44
Phytane				44			44
Pristane				44			44
Total Petroleum Hydrocarbons (Residual)	17	21	11	663		39	751
Total Petroleum Hydrocarbons (Residual, silica gel treated)		127	10	216		32	385
Total Petroleum Hydrocarbons	17	61	11	859	26	43	1,017
Total Petroleum Hydrocarbons (silica gel treated)		127	10	216		32	385
Radioisotopes							
Beryllium-7				111			111
Cesium-137				111			111
Lead-210				111			111
Radium-226				111			111

Notes:

^a Data collected within Ross Island Lagoon were not presented in Section 5.

BTEX - benzene, toluene, ethylbenzene, and total xylene

PAH - polycyclic aromatic hydrocarbon

PCB - polychlorinated biphenyl

PCDD/F - dioxin/furan

SVOC - semivolatile organic compound

Total TCDD TEQ - sum of PCDD/F and PCB congener TCDD TEQ

VOC - volatile organic compound

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
Grain Size	
Coarse sand	44
Medium sand	44
Fine sand	44
Coarse silt	44
Medium silt	44
Fine silt	44
Very fine silt	44
>9 Phi clay	44
8-9 Phi clay	44
Fine gravel	44
Fines	44
Medium gravel	44
Very coarse sand	44
Very fine sand	44
Conventionals	
Specific Gravity	40
Sulfide	1
Total organic carbon	51
Total solids	52
Metals	
Aluminum	50
Antimony	50
Arsenic	50
Cadmium	50
Chromium	50
Chromium hexavalent	45
Copper	50
Lead	50
Mercury	50
Nickel	50
Selenium	50
Silver	50
Zinc	50
2-Methylnaphthalene	49
Acenaphthene	49
Acenaphthylene	49
Anthracene	49
Benzo(a)anthracene	49
Benzo(a)pyrene	49
Benzo(b)fluoranthene	49
Benzo(g,h,i)perylene	49
Benzo(k)fluoranthene	49
Chrysene	49
Dibenzo(a,h)anthracene	49
Fluoranthene	49
Fluorene	49
High Molecular Weight PAH	49
Indeno(1,2,3-cd)pyrene	49
Low Molecular Weight PAH	49
Naphthalene	51
Phenanthrene	49

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
Pyrene	49
Total cPAHs	49
Total PAHs	49
Butyltins	
Butyltin ion	48
Dibutyltin ion	48
Tetrabutyltin	48
Tributyltin ion	48
PCB Aroclors	
Aroclor 1016	48
Aroclor 1221	48
Aroclor 1232	48
Aroclor 1242	48
Aroclor 1248	48
Aroclor 1254	48
Aroclor 1260	48
Aroclor 1262	48
Aroclor 1268	48
Total PCB Aroclors	48
PCB Congeners	
Total PCB TEQ (ND = 0)	52
PCB001	52
PCB002	52
PCB003	52
PCB004 & 010	52
PCB005 & 008	52
PCB006	52
PCB007 & 009	52
PCB011	52
PCB012 & 013	52
PCB014	52
PCB015	52
PCB016 & 032	52
PCB017	52
PCB018	52
PCB019	52
PCB020 & 021 & 033	52
PCB022	52
PCB023	52
PCB024 & 027	52
PCB025	52
PCB026	52
PCB028	52
PCB029	52
PCB030	52
PCB031	52
PCB034	52
PCB035	52
PCB036	52
PCB037	52
PCB038	52

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
PCB039	52
PCB040	52
PCB041 & 064 & 071 & 072	52
PCB042 & 059	52
PCB043 & 049	52
PCB044	52
PCB045	52
PCB046	52
PCB047	52
PCB048 & 075	52
PCB050	52
PCB051	52
PCB052 & 069	52
PCB053	52
PCB054	52
PCB055	52
PCB056 & 060	52
PCB057	52
PCB058	52
PCB061 & 070	52
PCB062	52
PCB063	52
PCB065	52
PCB066 & 076	52
PCB067	52
PCB068	52
PCB073	52
PCB074	52
PCB077	52
PCB078	52
PCB079	52
PCB080	52
PCB081	52
PCB082	52
PCB083	52
PCB084 & 092	52
PCB085 & 116	52
PCB086	52
PCB087 & 117 & 125	52
PCB088 & 091	52
PCB089	52
PCB090 & 101	52
PCB093	52
PCB094	52
PCB095 & 098 & 102	52
PCB096	52
PCB097	52
PCB099	52
PCB100	52
PCB103	52
PCB104	52
PCB105	52
PCB106 & 118	52

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
PCB107 & 109	52
PCB108 & 112	52
PCB110	52
PCB111 & 115	52
PCB113	52
PCB114	52
PCB119	52
PCB120	52
PCB121	52
PCB122	52
PCB123	52
PCB124	52
PCB126	52
PCB127	52
PCB128 & 162	52
PCB129	52
PCB130	52
PCB131	52
PCB132 & 161	52
PCB133 & 142	52
PCB134 & 143	52
PCB135	52
PCB136	52
PCB137	52
PCB138 & 163 & 164	52
PCB139 & 149	52
PCB140	52
PCB141	52
PCB144	52
PCB145	52
PCB146 & 165	52
PCB147	52
PCB148	52
PCB150	52
PCB151	52
PCB152	52
PCB153	52
PCB154	52
PCB155	52
PCB156	52
PCB157	52
PCB158 & 160	52
PCB159	52
PCB166	52
PCB167	52
PCB168	52
PCB169	52
PCB170	52
PCB171	52
PCB172	52
PCB173	52
PCB174	52
PCB175	52

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
PCB176	52
PCB177	52
PCB178	52
PCB179	52
PCB180	52
PCB181	52
PCB182 & 187	52
PCB183	52
PCB184	52
PCB185	52
PCB186	52
PCB188	52
PCB189	52
PCB190	52
PCB191	52
PCB192	52
PCB193	52
PCB194	52
PCB195	52
PCB196 & 203	52
PCB197	52
PCB198	52
PCB199	52
PCB200	52
PCB201	52
PCB202	52
PCB204	52
PCB205	52
PCB206	52
PCB207	52
PCB208	52
PCB209	52
Total PCB Congeners	52
PCB Homologs	
Dichlorobiphenyl homologs	52
Heptachlorobiphenyl homologs	52
Hexachlorobiphenyl homologs	52
Monochlorobiphenyl homologs	52
Nonachlorobiphenyl homologs	52
Octachlorobiphenyl homologs	52
Pentachlorobiphenyl homologs	52
Tetrachlorobiphenyl homologs	52
Trichlorobiphenyl homologs	52

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
PCDD/F Homologs	
Heptachlorodibenzofuran homologs	48
Heptachlorodibenzo-p-dioxin homologs	48
Hexachlorodibenzofuran homologs	48
Hexachlorodibenzo-p-dioxin homologs	48
Octachlorodibenzofuran	48
Octachlorodibenzo-p-dioxin	48
Pentachlorodibenzofuran homologs	48
Pentachlorodibenzo-p-dioxin homologs	48
Tetrachlorodibenzofuran homologs	48
Tetrachlorodibenzo-p-dioxin homologs	48
Total PCDD/F	48
PCDD/Fs	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	48
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	48
1,2,3,4,7,8,9-Heptachlorodibenzofuran	48
1,2,3,4,7,8-Hexachlorodibenzofuran	48
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	48
1,2,3,6,7,8-Hexachlorodibenzofuran	48
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	48
1,2,3,7,8,9-Hexachlorodibenzofuran	48
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	48
1,2,3,7,8-Pentachlorodibenzofuran	48
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	48
2,3,4,6,7,8-Hexachlorodibenzofuran	48
2,3,4,7,8-Pentachlorodibenzofuran	48
2,3,7,8-Tetrachlorodibenzofuran	48
2,3,7,8-Tetrachlorodibenzo-p-dioxin	48
TCDD TEQ (ND = 0)	48
Total TCDD TEQ (ND = 0)	52
Pesticides	
2,4'-DDD	50
2,4'-DDE	50
2,4'-DDT	50
4,4'-DDD	50
4,4'-DDE	50
4,4'-DDT	50
Aldrin	50
alpha-Endosulfan	50
alpha-Hexachlorocyclohexane	50
beta-Endosulfan	50
beta-Hexachlorocyclohexane	50
cis-Chlordane	50
cis-Nonachlor	50
delta-Hexachlorocyclohexane	50
Dieldrin	50
Endosulfan sulfate	50
Endrin	50
Endrin aldehyde	50
Endrin ketone	50
gamma-Hexachlorocyclohexane (Lindane)	50
Heptachlor	50

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
Heptachlor epoxide	50
Methoxychlor	50
Mirex	50
Oxychlordane	50
Total Chlordanes	50
Total Endosulfan	50
Total DDD	50
Total DDx	50
Total DDE	50
Total DDT	50
Toxaphene	50
trans-Chlordanes	50
trans-Nonachlor	50
Herbicides	
2,4,5-T	47
2,4-D	47
2,4-DB	47
Dalapon	47
Dicamba	47
Dichloroprop	47
Dinoseb	47
MCPA	47
MCPP	47
Silvex	47
Phthalates	
Bis(2-ethylhexyl) phthalate	49
Butylbenzyl phthalate	49
Dibutyl phthalate	49
Diethyl phthalate	49
Dimethyl phthalate	49
Di-n-octyl phthalate	49
SVOCs	
1,2,4-Trichlorobenzene	49
1,2-Dichlorobenzene	49
1,3-Dichlorobenzene	49
1,4-Dichlorobenzene	51
2,4-Dinitrotoluene	49
2,6-Dinitrotoluene	49
2-Chloronaphthalene	49
2-Nitroaniline	49
3,3'-Dichlorobenzidine	49
3-Nitroaniline	49
4-Bromophenyl phenyl ether	49
4-Chloroaniline	49
4-Chlorophenyl phenyl ether	49
4-Nitroaniline	49
Aniline	49
Azobenzene	49
Benzoic acid	49
Benzyl alcohol	49
Bis(2-chloroethoxy) methane	49
Bis(2-chloroethyl) ether	49

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
Bis(2-chloroisopropyl) ether	49
Carbazole	49
Dibenzofuran	49
Hexachlorobenzene	50
Hexachlorobutadiene	50
Hexachlorocyclopentadiene	49
Hexachloroethane	50
Isophorone	49
Nitrobenzene	49
N-Nitrosodimethylamine	49
N-Nitrosodiphenylamine	49
N-Nitrosodipropylamine	49
Phenols	
2,3,4,5-Tetrachlorophenol	44
2,3,5,6-Tetrachlorophenol	44
2,4,5-Trichlorophenol	32
2,4,6-Trichlorophenol	44
2,4-Dichlorophenol	49
2,4-Dimethylphenol	49
2,4-Dinitrophenol	49
2-Chlorophenol	49
2-Methylphenol	49
2-Nitrophenol	49
4,6-Dinitro-2-methylphenol	49
4-Chloro-3-methylphenol	49
4-Methylphenol	49
4-Nitrophenol	49
Pentachlorophenol	44
Phenol	49
VOCs	
1,1,1,2-Tetrachloroethane	48
1,1,1-Trichloroethane	48
1,1,2,2-Tetrachloroethane	48
1,1,2-Trichloroethane	48
1,1-Dichloroethane	48
1,1-Dichloroethene	48
1,2,3-Trichloropropane	48
1,2-Dichloroethane	48
1,2-Dichloropropane	48
1,4-Dichloro-trans-2-butene	48
2-Chloroethyl vinyl ether	48
Acetone	48
Acrolein	48
Acrylonitrile	48
Benzene	48
Bromochloromethane	48
Bromodichloromethane	48
Bromoform	48
Bromomethane	48
BTEX	48
Carbon disulfide	48
Carbon tetrachloride	48

Table 2.3-4. Summary of LWG Sediment Trap Sample Counts.

Analyte	# of LWG Samples
Chlorobenzene	48
Chlorodibromomethane	48
Chloroethane	48
Chloroform	48
Chloromethane	48
cis-1,2-Dichloroethene	48
cis-1,3-Dichloropropene	48
Dichlorodifluoromethane	48
Ethylbenzene	48
Ethylene dibromide	48
Isopropylbenzene	48
m,p-Xylene	48
Methyl iodide	48
Methyl isobutyl ketone	48
Methyl n-butyl ketone	48
Methyl tert-butyl ether	48
Methylene bromide	48
Methylene chloride	48
Methylethyl ketone	48
o-Xylene	48
Styrene	48
Tetrachloroethene	48
Toluene	48
trans-1,2-Dichloroethene	48
trans-1,3-Dichloropropene	48
Trichloroethene	48
Trichlorofluoromethane	48
Vinyl acetate	48
Vinyl chloride	48
Xylene	48
Petroleum	
Total Petroleum Hydrocarbons (Diesel)	47
Total Petroleum Hydrocarbons (Gasoline)	49
Total Petroleum Hydrocarbons (Residual)	47
Total Petroleum Hydrocarbons	47

Notes:

BTEX - benzene, toluene, ethylbenzene, and total xylene
 cPAH - carcinogenic polycyclic aromatic hydrocarbon
 LWG - Lower Willamette Group
 PAH - polycyclic aromatic hydrocarbon
 PCB - polychlorinated biphenyl
 PCDD/F - dioxin/furan
 SVOC - semivolatile organic compound
 Total TCDD TEQ - sum of PCDD/F and PCB congener TCDD TEQ
 VOC - volatile organic compound

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^a

Analyte	Sampling Date																		Other Parties
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	
Conventionals																			
Alkalinity																			12
Bicarbonate																			3
Chloride																			15
Conductivity	24			25			26											46	23
Cyanide																			144
Cyanide (dissolved)																			180
Cyanide amenable to chlorination																			180
Cyanide amenable to chlorination (dissolved)																			180
Depth	17			25			26											46	114
Dissolved organic carbon	25			25			24			4		14						40	360
Dissolved oxygen	23			25			26											46	143
Free cyanide																			180
Free cyanide (dissolved)																			180
Hardness as CaCO ₃	25			25			24			4		4						38	120
Hardness as CaCO ₃ (dissolved)												10		40				4	54
Nitrate																			3
Nitrite																			3
Oxidation-Reduction Potential	11			25			26											46	22
Perchlorate	2			2			2					2		6				6	20
pH	24			25			26											46	23
Salinity																			3
Sulfate																			15
Sulfide																			180
Temperature	24			25			26											46	23
Total dissolved solids	25			25			24			4		14		40				42	174
Total organic carbon	25			25			24			4		14		40				42	357
Total suspended solids	25			25			24			4		14		40				42	2,711
Total suspended solids w/0.45 um filter																			54
Turbidity																			46
Metals																			
Aluminum				25			24			4		14		40				42	4
Aluminum (dissolved)				25			24			4		14		40				42	149
Antimony	25			25			24			4		14		40				42	7
Antimony (dissolved)	25			25			24			4		14		40				42	181
Arsenic	25			25			24			4		14		40				42	59
Arsenic (dissolved)	25			25			24			4		14		40				42	233
Barium																		4	
Beryllium																		4	
Cadmium	25			25			24			4		14		40				42	7
Cadmium (dissolved)	25			25			24			4		14		40				42	181
Calcium																		15	
Calcium (dissolved)																		3	
Chromium	25			25			24			4		14		40				42	50
Chromium (dissolved)	25			25			24			4		14		40				42	224
Chromium hexavalent	2			2			2					2		6				6	174
Cobalt																		4	
Copper	25			25			24			4		14		40				42	4
Copper (dissolved)	25			25			24			4		14		40				42	227
Iron																		3	
Iron (dissolved)																		195	
Lead	25			25			24			4		14		40				42	183
Lead (dissolved)	25			25			24			4		14		40				42	181
Magnesium																		15	
Magnesium (dissolved)																		3	
Manganese																		19	
Manganese (dissolved)																		3	
Mercury	25			25			24			4		14		40				42	15
Mercury (dissolved)	25			25			24			4		14		40				42	189
Nickel	25			25			24			4		14		40				42	3
Nickel (dissolved)	25			25			24			4		14		40				42	177

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^{a,b}

Analyte	Sampling Date																Other Parties						
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
Potassium																						15	15
Potassium (dissolved)																						3	3
Selenium	25			25			24			4			14			40			42			4	178
Selenium (dissolved)	25			25			24			4			14			40			42				174
Silver	25			25			24			4			14			40			42			7	181
Silver (dissolved)	25			25			24			4			14			40			42			3	177
Sodium																						15	15
Sodium (dissolved)																						3	3
Thallium	25																					4	29
Thallium (dissolved)	25																						25
Vanadium																						4	4
Zinc	25			25			24			4			14			40			42			53	227
Zinc (dissolved)	25			25			24			4			14			40			42			3	177
Butyltins																							
Butyltin ion	25			25			24			4			14			40			42			3	177
Dibutyltin ion	25			25			24			4			14			40			42			3	177
Tetrabutyltin	25			25			24			4			14			40			42			3	177
Tributyltin ion	25			25			24			4			14			40			42			3	177
PCB Aroclors																							
Aroclor 1016	21			17			16															7	61
Aroclor 1221	21			17			16															7	61
Aroclor 1232	21			17			16															7	61
Aroclor 1242	21			17			16															7	61
Aroclor 1248	21			17			16															7	61
Aroclor 1254	21			17			16															7	61
Aroclor 1260	21			17			16															7	61
Aroclor 1262	21			17			16															4	58
Aroclor 1268	21			17			16															4	58
Total PCB Aroclors	21			17			16															7	61
PCB Congeners																							
Total PCB TEQ (ND = 0)	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB001	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB002	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB003	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB004	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB005	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB006	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB007	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB008	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB009	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB010	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB011	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB012																					4	4	
PCB012 & 013	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	241	
PCB013																					4	4	
PCB014	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB015	8	8	8	8	8	8	8	7	3	3	14	14	40	40	40	40	40	40	40	40	40	245	
PCB016	8	8	8	8	8																		

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^{a,b}

Analyte	Sampling Date																		Other Parties			
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007			
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	
PCB026 & 029		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB027		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4
PCB028																						4
PCB029																						4
PCB030																						4
PCB031		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB032		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4
PCB033																						4
PCB034		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4
PCB035		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB036		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB037		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB038		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB039		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB040																						4
PCB040 & 041 & 071		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB041																						4
PCB042		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB043		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB044																						4
PCB044 & 047 & 065		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB045																						4
PCB045 & 051		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB046		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB047																						4
PCB048		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB049																						4
PCB049 & 069		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB050																						4
PCB050 & 053		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB051																						4
PCB052		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB053																						4
PCB054		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB055		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB056		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB057		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB058		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB059																						4
PCB059 & 062 & 075		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB060		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB061																						4
PCB061 & 070 & 074 & 076		8	8		8	8		8	7		3	3		14	14		40	40		40	40	241
PCB062																						4
PCB063		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB064		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB065																						4
PCB066		8	8		8	8		8	7		3	3		14	14		40	40		40	40	245
PCB067		8	8		8	8		8	7		3											

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^a

Analyte	Sampling Date																			Other Parties	Grand Total		
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
PCB080		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB081		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB082		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB083																						4	4
PCB083 & 099		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB084		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB085																						4	4
PCB085 & 116 & 117		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB086																						4	4
PCB086 & 087 & 097 & 108 & 119 & 125		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB087																						4	4
PCB088																						4	4
PCB088 & 091		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB089		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB090																						4	4
PCB090 & 101 & 113		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB091																						4	4
PCB092		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB093																						4	4
PCB093 & 095 & 098 & 100 & 102		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB094		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB095																						4	4
PCB096		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB097																						4	4
PCB098																						4	4
PCB099																						4	4
PCB100																						4	4
PCB101																						4	4
PCB102																						4	4
PCB103		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB104		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB105		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB106		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB107																						4	4
PCB107 & 124		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB108																						4	4
PCB109		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB110																						4	4
PCB110 & 115		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB111		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB112		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB113																						4	4
PCB114		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB115																						4	4
PCB116																						4	4
PCB117																						4	4
PCB118		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB119																						4	4
PCB120		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB121		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB122		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB123		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB124																						4	4
PCB125																						4	4
PCB126		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB127		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB128 & 166		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	241
PCB129																						4	4
PCB129 & 138 & 160 & 163		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB130		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB131		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^{a,b}

Analyte	Sampling Date																		Other Parties				
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
PCB132		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB133		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB134																						4	4
PCB134 & 143		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB135																						4	4
PCB135 & 151 & 154		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB136		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB137		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB138																						4	4
PCB139																						4	4
PCB139 & 140		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB140																						4	4
PCB141		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB142		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB143																						4	4
PCB144		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB145		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB146		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB147																						4	4
PCB147 & 149		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB148		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB149																						4	4
PCB150		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB151																						4	4
PCB152		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB153																						4	4
PCB153 & 168		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB154																						4	4
PCB155		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB156																						4	4
PCB156 & 157		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB157																						4	4
PCB158		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB159		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB160																						4	4
PCB161		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB162		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB163																						4	4
PCB164		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB165		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB166																						4	4
PCB167		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB168																						4	4
PCB169		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB170		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB171																						4	4
PCB171 & 173		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB172</td																							

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^{a,b}

Analyte	Sampling Date																		Other Parties				
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
PCB184		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB185																						4	4
PCB186		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB187		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB188		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB189		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB190		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB191		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB192		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB193																						4	4
PCB194		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB195		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB196		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB197																						4	4
PCB197 & 200		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB198																						4	4
PCB198 & 199		8	8		8	8		8	7		3	3		14	14		40	40		40	40		241
PCB199																						4	4
PCB200																						4	4
PCB201		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB202		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB203		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB204		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB205		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB206		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB207		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB208		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB209		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Total PCB Congeners		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCB Homologs																							
Dichlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Heptachlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Hexachlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Monochlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		29	40	4	234
Nonachlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Octachlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Pentachlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Tetrachlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
Trichlorobiphenyl homologs		8	8		8	8		8	7		3	3		14	14		40	40		40	40	4	245
PCDD/Fs																							
1,2,3,4,6,7,8-Heptachlorodibenzofuran		6	6		6	6		6	6		3	3		14	14		22	22		22	22	4	162
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin		6	6		6	6		6	6		3	3		14	14		22	22		22	22	4	162
1,2,3,4,7,8,9-Heptachlorodibenzofuran		6	6		6	6		6	6		3	3		14	14		22	22		22	22	4	162
1,2,3,4,7,8-Hexachlorodibenzofuran		6	6		6	6		6	6		3	3		14	14		22	22		22	22	4	162
1,2,3,4,7,8-H																							

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^a

Analyte	Sampling Date																				Other Parties	Grand Total	
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
PCDD/F Homologs																							
Heptachlorodibenzofuran homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Heptachlorodibenzo-p-dioxin homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Hexachlorodibenzofuran homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Hexachlorodibenzo-p-dioxin homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Octachlorodibenzofuran	6	6		6	6		6	6		3	3		14	14		22	22		22	22	4	162	
Octachlorodibenzo-p-dioxin	6	6		6	6		6	6		3	3		14	14		22	22		22	22	4	162	
Pentachlorodibenzofuran homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Pentachlorodibenzo-p-dioxin homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Tetrachlorodibenzofuran homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Tetrachlorodibenzo-p-dioxin homologs	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Total PCDD/F	6	6		6	6		6	6		3	3		14	14		22	22		22	22		158	
Pesticides																							
2,4'-DDD	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
2,4'-DDE	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
2,4'-DDT	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
4,4'-DDD	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
4,4'-DDD (dissolved)																					3	3	
4,4'-DDE	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
4,4'-DDE (dissolved)																					3	3	
4,4'-DDT	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
4,4'-DDT (dissolved)																					3	3	
Aldrin	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
alpha-Endosulfan	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
alpha-Hexachlorocyclohexane	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
alpha-Hexachlorocyclohexane (dissolved)																					3	3	
beta-Endosulfan	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
beta-Hexachlorocyclohexane	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
cis-Chlordane	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
cis-Chlordane (dissolved)																					3	3	
cis-Nonachlor	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
delta-Hexachlorocyclohexane	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Dieldrin	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Dieldrin (dissolved)																					3	3	
Endosulfan (dissolved)																					1	1	
Endosulfan sulfate	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Endrin	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Endrin (dissolved)																					3	3	
Endrin aldehyde	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Endrin ketone	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
gamma-Hexachlorocyclohexane (Lindane)	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Heptachlor	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Heptachlor epoxide	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Heptachlor epoxide (dissolved)																					3	3	
Methoxychlor	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Methoxychlor (dissolved)																					3	3	
Mirex	19			17			16														4	56	
Oxychlordane	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Total Chlordanes	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Total Chlordanes (dissolved)																					3	3	
Total Endosulfan	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	4	274	
Total DDD	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
Total DDD (dissolved)																					3	3	
Total DDx	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
Total DDx (dissolved)																					3	3	
Total DDE	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
Total DDE (dissolved)																					3	3	
Total DDT	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
Total DDT (dissolved)																					3	3	
Total 4,4'-DDx	19	8	8	17	8	8	16	8	8	3	3		14	14	18	26	26	14	26	26	7	277	
Toxaphene	19			17			16									18			14		4	88	

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^{a,b}

Analyte	Sampling Date																		Other Parties				
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
trans-Chlordane	19	8	8	17	8	8	16	8	8	3	3	14	14	18	26	26	14	26	26	4	274		
trans-Chlordane (dissolved)																				3	3		
trans-Nonachlor	19	8	8	17	8	8	16	8	8	3	3	14	14	18	26	26	14	26	26	4	274		
Herbicides																							
2,4,5-T	25			25			24			4		14		40			42					174	
2,4-D	25			25			24			4		14		40			42					174	
2,4-DB	25			25			24					14		40			42					170	
Dalapon	25			25			24					14		40			42					170	
Dicamba	25			25			24					14		40			42					170	
Dichloroprop	25			25			24			4		14		40			42					174	
Dinoseb	25			25			24					14		40			42					170	
MCPA	25			25			24					14		40			42					170	
MCPP	25			25			24					14		40			42					170	
Silvex	25			25			24			4		14		40			42					174	
PAHs																							
1-Methylnaphthalene																					10	10	
2-Methylnaphthalene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	18	362		
Acenaphthene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Acenaphthylene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Anthracene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Benzo(a)anthracene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	35	379		
Benzo(a)pyrene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Benzo(b)fluoranthene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Benzo(b+k)fluoranthene																				9	9		
Benzo(g,h,i)perylene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Benzo(j+k)fluoranthene																				22	170		
Benz(k)fluoranthene	25			25			24			4		14		40			42			54	228		
Chrysene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	35	379		
Dibenzo(a,h)anthracene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Fluoranthene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Fluorene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
High Molecular Weight PAH	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Indeno(1,2,3-cd)pyrene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Low Molecular Weight PAH	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Naphthalene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	77	421		
Phenanthrene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Pyrene	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Total cPAHs	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Total PAHs	25	8	8	25	8	8	24	8	8	4	3	14	14	40	22	22	42	22	22	54	398		
Phthalates																							
Bis(2-ethylhexyl) phthalate	25	8	8	25	8	8	24	8	8	4		14		40			42			8	230		
Butylbenzyl phthalate	25	8	8	25	8	8	24	8	8	4		14		40			42			8	230		
Dibutyl phthalate	25	8	8	25	8	8	24	8	8	4		14		40			42			8	230		
Diethyl phthalate	25	8	8	25	8	8	24	8	8	4		14		40			42			8	230		
Dimethyl phthalate	25	8	8	25	8	8	24	8</td															

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^a

Table 2.3-5. Summary of Surface Water Sample Counts in the RI Data Set.^{a,b}

Analyte	Sampling Date																		Other Parties				
	LWG - November 2004			LWG - March 2005			LWG - July 2005			LWG - January 2006			LWG - September 2006			LWG - November 2006			LWG - January-March 2007				
	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter	surface water	surface water from XAD column	surface water particulates from XAD filter		
4-Chlorotoluene																						23	23
Acetone																						27	27
Acrylonitrile																						23	23
Benzene																						30	30
Bromobenzene																						23	23
Bromochloromethane																						27	27
Bromodichloromethane																						27	27
Bromoform																						27	27
Bromomethane																						27	27
BTEX																						30	30
Carbon disulfide																						27	27
Carbon tetrachloride																						27	27
Chlorobenzene																						27	27
Chlorodibromomethane																						27	27
Chloroethane																						27	27
Chloroform																						27	27
Chloromethane																						27	27
cis-1,2-Dichloroethylene																						27	27
cis-1,3-Dichloropropene																						27	27
Dichlorodifluoromethane																						27	27
Ethylbenzene																						30	30
Ethylene dibromide																						27	27
Hexahydrobenzene																						4	4
Isopropylbenzene																						27	27
m,p-Xylene																						30	30
Methyl acetate																						4	4
Methyl isobutyl ketone																						27	27
Methyl n-butyl ketone																						27	27
Methyl tert-butyl ether																						27	27
Methylcyclohexane																						4	4
Methylene bromide																						23	23
Methylene chloride																						27	27
Methylethyl ketone																						27	27
n-Butylbenzene																						23	23
n-Propylbenzene																						23	23
o-Xylene																						30	30
Sec-butylbenzene																						23	23
Styrene																						27	27
tert-Butylbenzene																						23	23
Tetrachloroethylene																						27	27
Toluene																						30	30
trans-1,2-Dichloroethylene																						27	27
trans-1,3-Dichloropropene																						27	27
Trichloroethylene																						30	30
Trichlorofluoromethane																						27	27
Vinyl chloride																						27	27
Xylene																						30	30
Grand Total	3,902	2,026	2,026	3,847	2,026	2,026	3,688	2,026	1,856	444	762	762	1,642	3,556	3,556	5,324	8,806	8,806	5,748	8,769	8,780	9,791	90,169

Notes:

^a LWG surface water samples were collected by peristaltic pump. Non-LWG surface water samples were collected using either a grab sampler or pumping device.

^b With the exception of City of Portland-generated total suspended solids data, no other non-LWG surface water data are included in Section 5.

BTEX - benzene, toluene, ethylbenzene, and total xylene

LWG - Lower Willamette Group

PAH - polycyclic aromatic hydrocarbon

PCB - polychlorinated biphenyl

RI - remedial investigation

SVOC - semivolatile organic compound

Total TCDD TEQ - sum of PCDD/F and PCB congener TCDD TEQ

VOC - volatile organic compound

XAD - Amberlite® XAD®-2 is a hydrophobic crosslinked polystyrene copolymer resin

XAD filter - a 0.5mm glass fiber filter cartridge

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap			Additional Data from Other Parties	Grand Total			
	LWG		GE	Port of Portland Terminal 4		Port of Portland Terminal 4		GE					
	LWG	GE				LWG	GE						
Conventional													
Alkalinity					2					2			
Chloride					2					2			
Conductivity		51			16					67			
Cyanide					2					2			
Dissolved organic carbon	119	6		26						151			
Flow					8					8			
Hardness as CaCO ₃					4					4			
Nitrate					2					2			
Nitrite					2					2			
pH		56			51					107			
Phosphorus					2					2			
Sulfate					2					2			
Temperature		56			16					72			
Total dissolved solids					6					6			
Total organic carbon	141	6	26	4	11	40	5			233			
Total solids						44	6	1		51			
Total suspended solids	146	8	26		89					269			
Turbidity		56		26	8					90			
Metals													
Aluminum	121			27	33	19	5			205			
Aluminum (dissolved)	82			27	3					112			
Antimony	121	8	27		64	19	5			244			
Antimony (dissolved)	82	8	27		2					119			
Arsenic	123	8	27		88	19	5			270			
Arsenic (dissolved)	82	8	27		31					148			
Barium					61					61			
Barium (dissolved)					12					12			
Beryllium		8			32					40			
Beryllium (dissolved)		8								8			
Cadmium	121	8	27		98	19	5			278			
Cadmium (dissolved)	82	8	27		33					150			
Calcium					27					27			
Chromium	121	8	27		114	19	5			294			
Chromium (dissolved)	82	8	27		33					150			
Chromium hexavalent					19					19			
Cobalt					9					9			
Copper	121	8	27		140	19	5			320			
Copper (dissolved)	82	8	27		41					158			
Iron					28					28			
Iron (dissolved)					1					1			
Lead	121	8	27		141	19	5			321			
Lead (dissolved)	82	8	27		41					158			
Magnesium					27					27			
Manganese					105					105			
Manganese (dissolved)					30					30			
Mercury	126	8	27		86	19	5			271			
Mercury (dissolved)	84	8	27		25					144			
Molybdenum					9					9			
Nickel	121	8	27		103	19	5			283			
Nickel (dissolved)	82	8	27		27					144			
Potassium					18					18			
Selenium	121	8	27		61	19	5			241			
Selenium (dissolved)	82	8	27		20					137			
Silver	121	7	27		76	19	5			255			
Silver (dissolved)	82	8	27		23					140			
Sodium					18					18			
Thallium		8			44					52			
Thallium (dissolved)		8			12					20			
Tin					18					18			
Vanadium					29					29			
Vanadium (dissolved)					1					1			
Zinc	121	8	27		145	19	5			325			
Zinc (dissolved)	82	8	27		41					158			

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap				
	LWG	GE	Port of Portland Terminal 4	City's Basin 53	Additional Data from Other Parties	LWG	Port of Portland Terminal 4	Additional Data from Other Parties	Grand Total
Butyltins					2				2
Tributyltin ion									
PCB Aroclors									
Aroclor 1016	6	26		50		4	1	87	
Aroclor 1016 (dissolved)	5	18							23
Aroclor 1221	6	26		52		4	1	89	
Aroclor 1221 (dissolved)	5	18							23
Aroclor 1232	6	26		50		4	1	87	
Aroclor 1232 (dissolved)	5	18							23
Aroclor 1242	6	26		64		4	1	101	
Aroclor 1242 (dissolved)	5	18							23
Aroclor 1248	6	26		64		4	1	101	
Aroclor 1248 (dissolved)	5	18							23
Aroclor 1254	6	26		64		4	1	101	
Aroclor 1254 (dissolved)	5	18							23
Aroclor 1260	6	26		64		4	1	101	
Aroclor 1260 (dissolved)	5	18							23
Aroclor 1262			26		2		4	1	33
Aroclor 1262 (dissolved)			18						18
Aroclor 1268			26		2		4	1	33
Aroclor 1268 (dissolved)			18						18
Total PCB Aroclors	6	26		64		4	1	101	
Total PCB Aroclors (dissolved)	5	18							23
PCB Congeners									
Total PCB TEQ (ND = 0)	103	8	27			35	6	179	
Total PCB TEQ (ND = 0) (dissolved)	11	8	9						28
PCB001	103	8	27			35	6	179	
PCB001 (dissolved)	11	8	9						28
PCB002	103	8	27			35	6	179	
PCB002 (dissolved)	11	8	9						28
PCB003	103	8	27			35	6	179	
PCB003 (dissolved)	11	8	9						28
PCB004			8						8
PCB004 & 010	103		27			35	6	171	
PCB004 & 010 (dissolved)	11		9						20
PCB004 (dissolved)			8						8
PCB005			8						8
PCB005 & 008	103		27			35	6	171	
PCB005 & 008 (dissolved)	11		9						20
PCB005 (dissolved)			8						8
PCB006	103	8	27			35	6	179	
PCB006 (dissolved)	11	8	9						28
PCB007			8						8
PCB007 & 009	103		27			35	6	171	
PCB007 & 009 (dissolved)	11		9						20
PCB007 (dissolved)			8						8
PCB008			8						8
PCB008 (dissolved)			8						8
PCB009			8						8
PCB009 (dissolved)			8						8
PCB010			8						8
PCB010 (dissolved)			8						8
PCB011	103	8	27			35	6	179	
PCB011 (dissolved)	11	8	9						28
PCB012 & 013	103	8	27			35	6	179	
PCB012 & 013 (dissolved)	11	8	9						28
PCB014	103	8	27			35	6	179	
PCB014 (dissolved)	11	8	9						28
PCB015	103	8	27			35	6	179	
PCB015 (dissolved)	11	8	9						28
PCB016			8						8
PCB016 & 032	103		27			35	6	171	
PCB016 & 032 (dissolved)	11		9						20
PCB016 (dissolved)			8						8
PCB017	103	8	27			35	6	179	

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap			Additional Data from Other Parties	Grand Total
	LWG	GE	Port of Portland Terminal 4	City's Basin 53		LWG	Port of Portland Terminal 4			
PCB017 (dissolved)	11	8	9							28
PCB018	103		27			35	6			171
PCB018 & 030			8							8
PCB018 & 030 (dissolved)			8							8
PCB018 (dissolved)	11		9							20
PCB019	103	8	27			35	6			179
PCB019 (dissolved)	11	8	9							28
PCB020 & 021 & 033	103		27			35	6			171
PCB020 & 021 & 033 (dissolved)	11		9							20
PCB020 & 028			8							8
PCB020 & 028 (dissolved)			8							8
PCB021 & 033			8							8
PCB021 & 033 (dissolved)			8							8
PCB022	103	8	27			35	6			179
PCB022 (dissolved)	11	8	9							28
PCB023	103	8	27			35	6			179
PCB023 (dissolved)	11	8	9							28
PCB024			8							8
PCB024 & 027	103		27			35	6			171
PCB024 & 027 (dissolved)	11		9							20
PCB024 (dissolved)			8							8
PCB025	103	8	27			35	6			179
PCB025 (dissolved)	11	8	9							28
PCB026	103		27			35	6			171
PCB026 & 029			8							8
PCB026 & 029 (dissolved)			8							8
PCB026 (dissolved)	11		9							20
PCB027			8							8
PCB027 (dissolved)			8							8
PCB028	103		27			35	6			171
PCB028 (dissolved)	11		9							20
PCB029	103		27			35	6			171
PCB029 (dissolved)	11		9							20
PCB030	103		27			35	6			171
PCB030 (dissolved)	11		9							20
PCB031	103	8	27			35	6			179
PCB031 (dissolved)	11	8	9							28
PCB032			8							8
PCB032 (dissolved)			8							8
PCB034	103	8	27			35	6			179
PCB034 (dissolved)	11	8	9							28
PCB035	103	8	27			35	6			179
PCB035 (dissolved)	11	8	9							28
PCB036	103	8	27			35	6			179
PCB036 (dissolved)	11	8	9							28
PCB037	103	8	27			35	6			179
PCB037 (dissolved)	11	8	9							28
PCB038	103	8	27			35	6			179
PCB038 (dissolved)	11	8	9							28
PCB039	103	8	27			35	6			179
PCB039 (dissolved)	11	8	9							28
PCB040	103		27			35	6			171
PCB040 & 041 & 071			8							8
PCB040 & 041 & 071 (dissolved)			8							8
PCB040 (dissolved)	11		9							20
PCB041 & 064 & 071 & 072	103		27			35	6			171
PCB041 & 064 & 071 & 072 (dissolved)	11		9							20
PCB042			8							8
PCB042 & 059	103		27			35	6			171
PCB042 & 059 (dissolved)	11		9							20
PCB042 (dissolved)			8							8
PCB043			8							8
PCB043 & 049	103		27			35	6			171
PCB043 & 049 (dissolved)	11		9							20
PCB043 (dissolved)			8							8
PCB044	103		27			35	6			171

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap			
	LWG	GE	Port of Portland Terminal 4	City's Basin 53	Additional Data from Other Parties		Port of Portland Terminal 4	Additional Data from Other Parties
					LWG	Grand Total		
PCB044 & 047 & 065		8						8
PCB044 & 047 & 065 (dissolved)		8						8
PCB044 (dissolved)	11		9					20
PCB045	103			27		35	6	171
PCB045 & 051		8						8
PCB045 & 051 (dissolved)		8						8
PCB045 (dissolved)	11		9					20
PCB046	103	8	27			35	6	179
PCB046 (dissolved)	11	8	9					28
PCB047	103		27			35	6	171
PCB047 (dissolved)	11		9					20
PCB048		8						8
PCB048 & 075	103		27			35	6	171
PCB048 & 075 (dissolved)	11		9					20
PCB048 (dissolved)		8						8
PCB049 & 069		8						8
PCB049 & 069 (dissolved)		8						8
PCB050	103		27			35	6	171
PCB050 & 053		8						8
PCB050 & 053 (dissolved)		8						8
PCB050 (dissolved)	11		9					20
PCB051	103		27			35	6	171
PCB051 (dissolved)	11		9					20
PCB052		8						8
PCB052 & 069	103		27			35	6	171
PCB052 & 069 (dissolved)	11		9					20
PCB052 (dissolved)		8						8
PCB053	103		27			35	6	171
PCB053 (dissolved)	11		9					20
PCB054	103	8	27			35	6	179
PCB054 (dissolved)	11	8	9					28
PCB055	103	8	27			35	6	179
PCB055 (dissolved)	11	8	9					28
PCB056		8						8
PCB056 & 060	103		27			35	6	171
PCB056 & 060 (dissolved)	11		9					20
PCB056 (dissolved)		8						8
PCB057	103	8	27			35	6	179
PCB057 (dissolved)	11	8	9					28
PCB058	103	8	27			35	6	179
PCB058 (dissolved)	11	8	9					28
PCB059 & 062 & 075		8						8
PCB059 & 062 & 075 (dissolved)		8						8
PCB060		8						8
PCB060 (dissolved)		8						8
PCB061 & 070	103		27			35	6	171
PCB061 & 070 & 074 & 076		8						8
PCB061 & 070 & 074 & 076 (dissolved)		8						8
PCB061 & 070 (dissolved)	11		9					20
PCB062	103		27			35	6	171
PCB062 (dissolved)	11		9					20
PCB063	103	8	27			35	6	179
PCB063 (dissolved)	11	8	9					28
PCB064		8						8
PCB064 (dissolved)		8						8
PCB065	103		27			35	6	171
PCB065 (dissolved)	11		9					20
PCB066		8						8
PCB066 & 076	103		27			35	6	171
PCB066 & 076 (dissolved)	11		9					20
PCB066 (dissolved)		8						8
PCB067	103	8	27			35	6	179
PCB067 (dissolved)	11	8	9					28
PCB068	103	8	27			35	6	179
PCB068 (dissolved)	11	8	9					28
PCB072		8						8

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap				
	LWG	GE	Port of Portland Terminal 4	City's Basin 53	Additional Data from Other Parties	LWG	Port of Portland Terminal 4	Additional Data from Other Parties	Grand Total
PCB072 (dissolved)		8							8
PCB073	103	8	27			35	6		179
PCB073 (dissolved)	11	8	9						28
PCB074	103		27			35	6		171
PCB074 (dissolved)	11		9						20
PCB077	103	8	27			35	6		179
PCB077 (dissolved)	11	8	9						28
PCB078	103	8	27			35	6		179
PCB078 (dissolved)	11	8	9						28
PCB079	103	8	27			35	6		179
PCB079 (dissolved)	11	8	9						28
PCB080	103	8	27			35	6		179
PCB080 (dissolved)	11	8	9						28
PCB081	103	8	27			35	6		179
PCB081 (dissolved)	11	8	9						28
PCB082	103	8	27			35	6		179
PCB082 (dissolved)	11	8	9						28
PCB083	103		27			35	6		171
PCB083 & 099		8							8
PCB083 & 099 (dissolved)		8							8
PCB083 (dissolved)	11		9						20
PCB084		8							8
PCB084 & 092	103		27			35	6		171
PCB084 & 092 (dissolved)	11		9						20
PCB084 (dissolved)		8							8
PCB085 & 116	103		27			35	6		171
PCB085 & 116 & 117		8							8
PCB085 & 116 & 117 (dissolved)		8							8
PCB085 & 116 (dissolved)	11		9						20
PCB086	103		27			35	6		171
PCB086 & 087 & 097 & 108 & 119 & 125		8							8
PCB086 & 087 & 097 & 108 & 119 & 125 (dissolved)		8							8
PCB086 (dissolved)	11		9						20
PCB087 & 117 & 125	103		27			35	6		171
PCB087 & 117 & 125 (dissolved)	11		9						20
PCB088 & 091	103	8	27			35	6		179
PCB088 & 091 (dissolved)	11	8	9						28
PCB089	103	8	27			35	6		179
PCB089 (dissolved)	11	8	9						28
PCB090 & 101	103		27			35	6		171
PCB090 & 101 & 113		8							8
PCB090 & 101 & 113 (dissolved)		8							8
PCB090 & 101 (dissolved)	11		9						20
PCB092		8							8
PCB092 (dissolved)		8							8
PCB093	103		27			35	6		171
PCB093 & 095 & 098 & 100 & 102		8							8
PCB093 & 095 & 098 & 100 & 102 (dissolved)		8							8
PCB093 (dissolved)	11		9						20
PCB094	103	8	27			35	6		179
PCB094 (dissolved)	11	8	9						28
PCB095 & 098 & 102	103		27			35	6		171
PCB095 & 098 & 102 (dissolved)	11		9						20
PCB096	103	8	27			35	6		179
PCB096 (dissolved)	11	8	9						28
PCB097	103		27			35	6		171
PCB097 (dissolved)	11		9						20
PCB099	103		27			35	6		171
PCB099 (dissolved)	11		9						20
PCB100	103		27			35	6		171
PCB100 (dissolved)	11		9						20
PCB103	103	8	27			35	6		179
PCB103 (dissolved)	11	8	9						28
PCB104	103	8	27			35	6		179
PCB104 (dissolved)	11	8	9						28

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap			Additional Data from Other Parties	Grand Total
	LWG	GE	Port of Portland Terminal 4	City's Basin 53		LWG	Port of Portland Terminal 4			
PCB105	103	8	27			35	6			179
PCB105 (dissolved)	11	8	9							28
PCB106		8								8
PCB106 & 118	103		27			35	6			171
PCB106 & 118 (dissolved)	11		9							20
PCB106 (dissolved)		8								8
PCB107 & 109	103		27			35	6			171
PCB107 & 109 (dissolved)	11		9							20
PCB107 & 124		8								8
PCB107 & 124 (dissolved)		8								8
PCB108 & 112	103		27			35	6			171
PCB108 & 112 (dissolved)	11		9							20
PCB109		8								8
PCB109 (dissolved)		8								8
PCB110	103		27			35	6			171
PCB110 & 115		8								8
PCB110 & 115 (dissolved)		8								8
PCB110 (dissolved)	11		9							20
PCB111		8								8
PCB111 & 115	103		27			35	6			171
PCB111 & 115 (dissolved)	11		9							20
PCB111 (dissolved)		8								8
PCB112		8								8
PCB112 (dissolved)		8								8
PCB113	103		27			35	6			171
PCB113 (dissolved)	11		9							20
PCB114	103	8	27			35	6			179
PCB114 (dissolved)	11	8	9							28
PCB118		8								8
PCB118 (dissolved)		8								8
PCB119	103		27			35	6			171
PCB119 (dissolved)	11		9							20
PCB120	103	8	27			35	6			179
PCB120 (dissolved)	11	8	9							28
PCB121	103	8	27			35	6			179
PCB121 (dissolved)	11	8	9							28
PCB122	103	8	27			35	6			179
PCB122 (dissolved)	11	8	9							28
PCB123	103	8	27			35	6			179
PCB123 (dissolved)	11	8	9							28
PCB124	103		27			35	6			171
PCB124 (dissolved)	11		9							20
PCB126	103	8	27			35	6			179
PCB126 (dissolved)	11	8	9							28
PCB127	103	8	27			35	6			179
PCB127 (dissolved)	11	8	9							28
PCB128 & 162	103		27			35	6			171
PCB128 & 162 (dissolved)	11		9							20
PCB128 & 166		8								8
PCB128 & 166 (dissolved)		8								8
PCB129	103		27			35	6			171
PCB129 & 138 & 160 & 163		8								8
PCB129 & 138 & 160 & 163 (dissolved)		8								8
PCB129 (dissolved)	11		9							20
PCB130	103	8	27			35	6			179
PCB130 (dissolved)	11	8	9							28
PCB131	103	8	27			35	6			179
PCB131 (dissolved)	11	8	9							28
PCB132		8								8
PCB132 & 161	103		27			35	6			171
PCB132 & 161 (dissolved)	11		9							20
PCB132 (dissolved)		8								8
PCB133		8								8
PCB133 & 142	103		27			35	6			171
PCB133 & 142 (dissolved)	11		9							20
PCB133 (dissolved)		8								8

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap			Additional Data from Other Parties	Grand Total
	LWG	GE	Port of Portland Terminal 4	City's Basin 53		LWG	Port of Portland Terminal 4			
PCB134 & 143	103	8	27			35	6			179
PCB134 & 143 (dissolved)	11	8	9							28
PCB135	103		27			35	6			171
PCB135 & 151 & 154		8								8
PCB135 & 151 & 154 (dissolved)		8								8
PCB135 (dissolved)	11		9							20
PCB136	103	8	27			35	6			179
PCB136 (dissolved)	11	8	9							28
PCB137	103	8	27			35	6			179
PCB137 (dissolved)	11	8	9							28
PCB138 & 163 & 164	103		27			35	6			171
PCB138 & 163 & 164 (dissolved)	11		9							20
PCB139 & 140		8								8
PCB139 & 140 (dissolved)		8								8
PCB139 & 149	103		27			35	6			171
PCB139 & 149 (dissolved)	11		9							20
PCB140	103		27			35	6			171
PCB140 (dissolved)	11		9							20
PCB141	103	8	27			35	6			179
PCB141 (dissolved)	11	8	9							28
PCB142		8								8
PCB142 (dissolved)		8								8
PCB144	103	8	27			35	6			179
PCB144 (dissolved)	11	8	9							28
PCB145	103	8	27			35	6			179
PCB145 (dissolved)	11	8	9							28
PCB146		8								8
PCB146 & 165	103		27			35	6			171
PCB146 & 165 (dissolved)	11		9							20
PCB146 (dissolved)		8								8
PCB147	103		27			35	6			171
PCB147 & 149		8								8
PCB147 & 149 (dissolved)		8								8
PCB147 (dissolved)	11		9							20
PCB148	103	8	27			35	6			179
PCB148 (dissolved)	11	8	9							28
PCB150	103	8	27			35	6			179
PCB150 (dissolved)	11	8	9							28
PCB151	103		27			35	6			171
PCB151 (dissolved)	11		9							20
PCB152	103	8	27			35	6			179
PCB152 (dissolved)	11	8	9							28
PCB153	103		27			35	6			171
PCB153 & 168		8								8
PCB153 & 168 (dissolved)		8								8
PCB153 (dissolved)	11		9							20
PCB154	103		27			35	6			171
PCB154 (dissolved)	11		9							20
PCB155	103	8	27			35	6			179
PCB155 (dissolved)	11	8	9							28
PCB156	103		27			35	6			171
PCB156 & 157		8								8
PCB156 & 157 (dissolved)		8								8
PCB156 (dissolved)	11		9							20
PCB157	103		27			35	6			171
PCB157 (dissolved)	11		9							20
PCB158		8								8
PCB158 & 160	103		27			35	6			171
PCB158 & 160 (dissolved)	11		9							20
PCB158 (dissolved)		8								8
PCB159	103	8	27			35	6			179
PCB159 (dissolved)	11	8	9							28
PCB161		8								8
PCB161 (dissolved)		8								8
PCB162		8								8
PCB162 (dissolved)		8								8

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap			
	LWG	GE	Port of	Additional Data from Other Parties	LWG	Port of	Additional Data from Other Parties	Grand Total
			Portland Terminal 4			Portland Terminal 4		
PCB164		8						8
PCB164 (dissolved)		8						8
PCB165		8						8
PCB165 (dissolved)		8						8
PCB166	103		27		35	6		171
PCB166 (dissolved)	11		9					20
PCB167	103	8	27		35	6		179
PCB167 (dissolved)	11	8	9					28
PCB168	103		27		35	6		171
PCB168 (dissolved)	11		9					20
PCB169	103	8	27		35	6		179
PCB169 (dissolved)	11	8	9					28
PCB170	103	8	27		35	6		179
PCB170 (dissolved)	11	8	9					28
PCB171	103		27		35	6		171
PCB171 & 173		8						8
PCB171 & 173 (dissolved)		8						8
PCB171 (dissolved)	11		9					20
PCB172	103	8	27		35	6		179
PCB172 (dissolved)	11	8	9					28
PCB173	103		27		35	6		171
PCB173 (dissolved)	11		9					20
PCB174	103	8	27		35	6		179
PCB174 (dissolved)	11	8	9					28
PCB175	103	8	27		35	6		179
PCB175 (dissolved)	11	8	9					28
PCB176	103	8	27		35	6		179
PCB176 (dissolved)	11	8	9					28
PCB177	103	8	27		35	6		179
PCB177 (dissolved)	11	8	9					28
PCB178	103	8	27		35	6		179
PCB178 (dissolved)	11	8	9					28
PCB179	103	8	27		35	6		179
PCB179 (dissolved)	11	8	9					28
PCB180	103		27		35	6		171
PCB180 & 193		8						8
PCB180 & 193 (dissolved)		8						8
PCB180 (dissolved)	11		9					20
PCB181	103	8	27		35	6		179
PCB181 (dissolved)	11	8	9					28
PCB182		8						8
PCB182 & 187	103		27		35	6		171
PCB182 & 187 (dissolved)	11		9					20
PCB182 (dissolved)		8						8
PCB183	103		27		35	6		171
PCB183 & 185		8						8
PCB183 & 185 (dissolved)		8						8
PCB183 (dissolved)	11		9					20
PCB184	103	8	27		35	6		179
PCB184 (dissolved)	11	8	9					28
PCB185	103		27		35	6		171
PCB185 (dissolved)	11		9					20
PCB186	103	8	27		35	6		179
PCB186 (dissolved)	11	8	9					28
PCB187		8						8
PCB187 (dissolved)		8						8
PCB188	103	8	27		35	6		179
PCB188 (dissolved)	11	8	9					28
PCB189	103	8	27		35	6		179
PCB189 (dissolved)	11	8	9					28
PCB190	103	8	27		35	6		179
PCB190 (dissolved)	11	8	9					28
PCB191	103	8	27		35	6		179
PCB191 (dissolved)	11	8	9					28
PCB192	103	8	27		35	6		179
PCB192 (dissolved)	11	8	9					28

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap			
	LWG	GE	Port of Portland Terminal 4	City's Basin 53	Additional Data from Other Parties	LWG	Port of Portland Terminal 4	Additional Data from Other Parties
PCB193	103			27		35	6	171
PCB193 (dissolved)	11			9				20
PCB194	103	8		27		35	6	179
PCB194 (dissolved)	11	8		9				28
PCB195	103	8		27		35	6	179
PCB195 (dissolved)	11	8		9				28
PCB196			8					8
PCB196 & 203	103			27		35	6	171
PCB196 & 203 (dissolved)	11			9				20
PCB196 (dissolved)		8						8
PCB197	103			27		35	6	171
PCB197 & 200		8						8
PCB197 & 200 (dissolved)		8						8
PCB197 (dissolved)	11			9				20
PCB198	103			27		35	6	171
PCB198 & 199		8						8
PCB198 & 199 (dissolved)		8						8
PCB198 (dissolved)	11			9				20
PCB199	103			27		35	6	171
PCB199 (dissolved)	11			9				20
PCB200	103			27		35	6	171
PCB200 (dissolved)	11			9				20
PCB201	103	8		27		35	6	179
PCB201 (dissolved)	11	8		9				28
PCB202	103	8		27		35	6	179
PCB202 (dissolved)	11	8		9				28
PCB203		8						8
PCB203 (dissolved)		8						8
PCB204	103	8		27		35	6	179
PCB204 (dissolved)	11	8		9				28
PCB205	103	8		27		35	6	179
PCB205 (dissolved)	11	8		9				28
PCB206	103	8		27		35	6	179
PCB206 (dissolved)	11	8		9				28
PCB207	103	8		27		35	6	179
PCB207 (dissolved)	11	8		9				28
PCB208	103	8		27		35	6	179
PCB208 (dissolved)	11	8		9				28
PCB209	103	8		27		35	6	179
PCB209 (dissolved)	11	8		9				28
Total PCB Congeners	103	8		27		35	6	179
Total PCB Congeners (dissolved)	11	8		9				28
PCB Homologs								
Dichlorobiphenyl homologs	103	8		27		35	6	179
Dichlorobiphenyl homologs (dissolved)	11	8		9				28
Heptachlorobiphenyl homologs	103	8		27		35	6	179
Heptachlorobiphenyl homologs (dissolved)	11	8		9				28
Hexachlorobiphenyl homologs	103	8		27		35	6	179
Hexachlorobiphenyl homologs (dissolved)	11	8		9				28
Monochlorobiphenyl homologs	103	8		27		35	6	179
Monochlorobiphenyl homologs (dissolved)	11	8		9				28
Nonachlorobiphenyl homologs	103	8		27		35	6	179
Nonachlorobiphenyl homologs (dissolved)	11	8		9				28
Octachlorobiphenyl homologs	103	8		27		35	6	179
Octachlorobiphenyl homologs (dissolved)	11	8		9				28
Pentachlorobiphenyl homologs	103	8		27		35	6	179
Pentachlorobiphenyl homologs (dissolved)	11	8		9				28
Tetrachlorobiphenyl homologs	103	8		27		35	6	179
Tetrachlorobiphenyl homologs (dissolved)	11	8		9				28
Trichlorobiphenyl homologs	103	8		27		35	6	179
Trichlorobiphenyl homologs (dissolved)	11	8		9				28

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap			
	LWG	GE	Port of	City's	Additional	Port of	Additional	
			Portland		Data from Other Parties	Portland	Data from Other Parties	
PCDD/Fs								
1,2,3,4,6,7,8-Heptachlorodibenzofuran					3			3
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin					3			3
1,2,3,4,7,8,9-Heptachlorodibenzofuran					3			3
1,2,3,4,7,8-Hexachlorodibenzofuran					3			3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin					3			3
1,2,3,6,7,8-Hexachlorodibenzofuran					3			3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin					3			3
1,2,3,7,8,9-Hexachlorodibenzofuran					3			3
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin					3			3
1,2,3,7,8-Pentachlorodibenzofuran					3			3
1,2,3,7,8-Pentachlorodibenzo-p-dioxin					3			3
2,3,4,6,7,8-Hexachlorodibenzofuran					3			3
2,3,4,7,8-Pentachlorodibenzofuran					3			3
2,3,7,8-Tetrachlorodibenzofuran					3			3
2,3,7,8-Tetrachlorodibenzo-p-dioxin					3			3
TCDD TEQ (ND = 0)					3			3
Total TCDD TEQ (ND = 0)	103	8	27		3	35	6	182
Total TCDD TEQ (ND = 0) (dissolved)	11	8	9					28
PCDD/F Homologs								
Heptachlorodibenzofuran homologs					3			3
Heptachlorodibenzo-p-dioxin homologs					3			3
Hexachlorodibenzofuran homologs					3			3
Hexachlorodibenzo-p-dioxin homologs					3			3
Octachlorodibenzofuran					3			3
Octachlorodibenzo-p-dioxin					3			3
Pentachlorodibenzofuran homologs					3			3
Pentachlorodibenzo-p-dioxin homologs					3			3
Tetrachlorodibenzofuran homologs					3			3
Tetrachlorodibenzo-p-dioxin homologs					3			3
Total PCDD/F					3			3
Pesticides								
2,4'-DDD	11		23		6	29	4	73
2,4'-DDD (dissolved)	2		16					18
2,4'-DDE	11		23		6	29	4	73
2,4'-DDE (dissolved)	2		16					18
2,4'-DDT	11		23		6	29	4	73
2,4'-DDT (dissolved)	2		16					18
4,4'-DDD	11		23		25	29	4	92
4,4'-DDD (dissolved)	2		16		15			33
4,4'-DDE	11		23		25	29	4	92
4,4'-DDE (dissolved)	2		16		15			33
4,4'-DDT	11		23		25	29	4	92
4,4'-DDT (dissolved)	2		16		15			33
Aldrin	11		23		11	29	4	78
Aldrin (dissolved)	2		16		1			19
alpha-Endosulfan	11		23		11	29	4	78
alpha-Endosulfan (dissolved)	2		16		1			19
alpha-Hexachlorocyclohexane	11		23		11	29	4	78
alpha-Hexachlorocyclohexane (dissolved)	2		16		1			19
beta-Endosulfan	11		23		11	29	4	78
beta-Endosulfan (dissolved)	2		16		1			19
beta-Hexachlorocyclohexane	11		23		11	29	4	78
beta-Hexachlorocyclohexane (dissolved)	2		16		1			19
Bromoxynil					2			2
Chlordane (technical)		12			4			16
Chlordane (technical) (dissolved)		9						9
Chlordecone					2			2
cis-Chlordane	11		23		11	29	4	78
cis-Chlordane (dissolved)	2		16		1			19
cis-Nonachlor	11		23		4	29	4	71
cis-Nonachlor (dissolved)	2		16					18
delta-Hexachlorocyclohexane	11		23		11	29	4	78
delta-Hexachlorocyclohexane (dissolved)	2		16		1			19
Dieldrin	11		23		10	29	4	77

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap			Grand Total
	LWG	GE	Port of Portland Terminal 4	City's Basin 53		LWG	Port of Portland Terminal 4	Additional Data from Other Parties	
Dieldrin (dissolved)	2		16						18
Endosulfan sulfate	11		23		11	29	4		78
Endosulfan sulfate (dissolved)	2		16		1				19
Endrin	11		23		11	29	4		78
Endrin (dissolved)	2		16		1				19
Endrin aldehyde	11		23		11	29	4		78
Endrin aldehyde (dissolved)	2		16						18
Endrin ketone	11		23		11	29	4		78
Endrin ketone (dissolved)	2		16		1				19
gamma-Hexachlorocyclohexane (Lindane)	11		23		11	29	4		78
gamma-Hexachlorocyclohexane (Lindane, dissolved)	2		16		1				19
Heptachlor	11		23		11	29	4		78
Heptachlor (dissolved)	2		16		1				19
Heptachlor epoxide	11		23		11	29	4		78
Heptachlor epoxide (dissolved)	2		16		1				19
Isobenzan					2				2
Methoxychlor	11		23		11	29	4		78
Methoxychlor (dissolved)	2		16		1				19
Mirex	11		23		2	29	4		69
Mirex (dissolved)	2		16						18
Oxychlordane	11		23		4	29	4		71
Oxychlordane (dissolved)	2		16						18
Total Chlordanes	11		23		11	29	4		78
Total Chlordanes (dissolved)	2		16		1				19
Total Endosulfan	11		23		11	29	4		78
Total Endosulfan (dissolved)	2		16		1				19
Total DDD	11		23		25	29	4		92
Total DDD (dissolved)	2		16		15				33
Total DDx	11		23		25	29	4		92
Total DDx (dissolved)	2		16		15				33
Total DDE	11		23		25	29	4		92
Total DDE (dissolved)	2		16		15				33
Total DDT	11		23		25	29	4		92
Total DDT (dissolved)	2		16		15				33
Total 4,4'-DDx					2				2
Toxaphene	11		23		9	29	4		76
Toxaphene (dissolved)	2		16		1				19
trans-Chlordane	11		23		11	29	4		78
trans-Chlordane (dissolved)	2		16		1				19
trans-Nonachlor	11		23		4	29	4		71
trans-Nonachlor (dissolved)	2		16						18
Herbicides									
2,4,5-T	89				3	17			109
2,4,5-T (dissolved)	10				1				11
2,4-D	89				3	17			109
2,4-D (dissolved)	10				1				11
2,4-DB	89				3	17			109
2,4-DB (dissolved)	10				1				11
Dalapon	89				3	17			109
Dalapon (dissolved)	10				1				11
Dicamba	89				3	17			109
Dicamba (dissolved)	10				1				11
Dichloroprop	89				3	17			109
Dichloroprop (dissolved)	10				1				11
Dinoseb	89				3	17			109
Dinoseb (dissolved)	10				1				11
MCPA	89				3	17			109
MCPA (dissolved)	10				1				11
MCPP	89				3	17			109
MCPP (dissolved)	10				1				11
Silvex	89				3	17			109
Silvex (dissolved)	10				1				11

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap		
	LWG	GE	Port of Portland Terminal 4	City's Basin 53		LWG	Port of Portland Terminal 4	Additional Data from Other Parties
Polycyclic Aromatic Hydrocarbons								
1-Methylnaphthalene					31			31
2-Methylnaphthalene	103	8	29	4	53	22	5	224
2-Methylnaphthalene (dissolved)	11	8	21					40
Acenaphthene	103	8	29	4	105	22	5	276
Acenaphthene (dissolved)	11	8	21					40
Acenaphthylene	103	8	29	4	105	22	5	276
Acenaphthylene (dissolved)	11	8	21					40
Anthracene	103	8	29	4	105	22	5	276
Anthracene (dissolved)	11	8	21					40
Benzo(a)anthracene	103	8	29	4	105	22	5	276
Benzo(a)anthracene (dissolved)	11	8	21					40
Benzo(a)pyrene	103	8	29	4	105	22	5	276
Benzo(a)pyrene (dissolved)	11	8	21					40
Benzo(b)fluoranthene	103	8	29	4	91	22	5	262
Benzo(b)fluoranthene (dissolved)	11	8	21					40
Benzo(b+k)fluoranthene					3			3
Benzo(g,h,i)perylene	103	8	29	4	105	22	5	276
Benzo(g,h,i)perylene (dissolved)	11	8	21					40
Benzo(k)fluoranthene	103	8	29	4	91	22	5	262
Benzo(k)fluoranthene (dissolved)	11	8	21					40
Benzofluoranthenes					15			15
Chrysene	103	8	29	4	105	22	5	276
Chrysene (dissolved)	11	8	21					40
Dibenzo(a,h)anthracene	103	8	29	4	105	22	5	276
Dibenzo(a,h)anthracene (dissolved)	11	8	21					40
Fluoranthene	103	8	29	4	105	22	5	276
Fluoranthene (dissolved)	11	8	21					40
Fluorene	103	8	29	4	105	22	5	276
Fluorene (dissolved)	11	8	21					40
High Molecular Weight PAH	103	8	29	4	105	22	5	276
High Molecular Weight PAH (dissolved)	11	8	21					40
Indeno(1,2,3-cd)pyrene	103	8	29	4	105	22	5	276
Indeno(1,2,3-cd)pyrene (dissolved)	11	8	21					40
Low Molecular Weight PAH	103	8	29	4	105	22	5	276
Low Molecular Weight PAH (dissolved)	11	8	21					40
Naphthalene	103	8	29	4	112	22	5	283
Naphthalene (dissolved)	11	8	21					40
Phenanthrene	103	8	29	4	105	22	5	276
Phenanthrene (dissolved)	11	8	21					40
Pyrene	103	8	29	4	105	22	5	276
Pyrene (dissolved)	11	8	21					40
Total cPAHs	103	8	29	4	105	22	5	276
Total cPAHs (dissolved)	11	8	21					40
Total PAHs	103	8	29	4	105	22	5	276
Total PAHs (dissolved)	11	8	21					40
Phthalates								
Bis(2-ethylhexyl) phthalate	48	7	26	4	84	22	5	196
Bis(2-ethylhexyl) phthalate (dissolved)	8	7	6					21
Butylbenzyl phthalate	48	7	26	4	84	22	5	196
Butylbenzyl phthalate (dissolved)	8	7	6					21
Dibutyl phthalate	48	7	26	4	84	22	5	196
Dibutyl phthalate (dissolved)	8	7	6					21
Diethyl phthalate	48	7	26	4	79	22	5	191
Diethyl phthalate (dissolved)	8	7	6					21
Dimethyl phthalate	48	7	26	4	80	22	5	192
Dimethyl phthalate (dissolved)	8	7	6					21
Di-n-octyl phthalate	48	7	26	4	83	22	5	195
Di-n-octyl phthalate (dissolved)	8	7	6					21

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap			
	LWG	GE	Port of	City's	Additional	Port of	Additional	
			Portland		Data from Other Parties	Portland	Data from Other Parties	
Analyte	LWG	GE	Port of Terminal 4	City's Basin 53	Additional Data from Other Parties	Port of Terminal 4	Additional Data from Other Parties	Grand Total
Semivolatile Organic Compounds								
1,2,4-Trichlorobenzene				4	34			38
1,2-Dichlorobenzene				4	34			38
1,3-Dichlorobenzene				4	34			38
1,4-Dichlorobenzene				4	34			38
2,4-Dimrotoluene				4	17			21
2,6-Dinitrotoluene				4	17			21
2-Chloronaphthalene				4	17			21
2-Nitroaniline				4	17			21
3,3'-Dichlorobenzidine				4	16			20
3-Nitroaniline				4	17			21
4-Bromophenyl phenyl ether				4	17			21
4-Chloroaniline				4	17			21
4-Chlorophenyl phenyl ether				4	17			21
4-Nitroaniline				4	17			21
Aniline					8			8
Benzoic acid				4	17			21
Benzyl alcohol				4	17			21
Bis(2-chloroethoxy) methane				4	17			21
Bis(2-chloroethyl) ether				4	17			21
Bis(2-chloroisopropyl) ether				4	17			21
Carbazole					15			15
Dibenzofuran	68		8	4	24	22	5	131
Dibenzofuran (dissolved)	11		8					19
Hexachlorobenzene	11		23	4	19	29	4	90
Hexachlorobenzene (dissolved)	2		16					18
Hexachlorobutadiene	11		23	4	34	29	4	105
Hexachlorobutadiene (dissolved)	2		16					18
Hexachlorocyclopentadiene				4	17			21
Hexachloroethane	11		23	4	17	29	4	88
Hexachloroethane (dissolved)	2		16					18
Isophorone				4	17			21
Nitrobenzene				4	17			21
N-Nitrosodimethylamine					8			8
N-Nitrosodiphenylamine				4	17			21
N-Nitrosodipropylamine				4	17			21
Phenols								
2,3,4,6-Tetrachlorophenol					8			8
2,4,5-Trichlorophenol				4	18			22
2,4,6-Trichlorophenol				4	18			22
2,4-Dichlorophenol				4	18			22
2,4-Dimethylphenol				4	18			22
2,4-Dinitrophenol				4	18			22
2,6-Dichlorophenol				4	18			22
2-Chlorophenol				4	18			22
2-Methylphenol				4	18			22
2-Nitrophenol				4	18			22
3- and 4-Methylphenol Coelution				4	14			18
4,6-Dinitro-2-methylphenol				4	18			22
4-Chloro-3-methylphenol				4	18			22
4-Methylphenol					11			11
4-Nitrophenol				4	18			22
Pentachlorophenol				4	29			33
Phenol				4	18			22
Tetrachlorophenol					2			2
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane					23			23
1,1,1-Trichloroethane					23			23
1,1,2,2-Tetrachloroethane					23			23
1,1,2-Trichloroethane					23			23
1,1-Dichloroethane					23			23
1,1-Dichloroethene					23			23
1,1-Dichloropropene					23			23
1,2,3-Trichlorobenzene					23			23
1,2,3-Trichloropropane					23			23

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Stormwater Outfall Sediment Trap			
	LWG	GE	Port of	City's	Additional	Port of	Additional	
			Portland		Data from Other Parties	Portland	Data from Other Parties	
Analyte	LWG	GE	Port of Portland Terminal 4	City's Basin 53	Additional Data from Other Parties	Port of Portland Terminal 4	Additional Data from Other Parties	Grand Total
1,2,4-Trimethylbenzene					28			28
1,2-Dibromo-3-chloropropane					23			23
1,2-Dichloroethane					23			23
1,2-Dichloropropane					23			23
1,3,5-Trimethylbenzene					28			28
1,3-Dichloropropane					23			23
1-Methyl-4-isopropylbenzene					23			23
2,2-Dichloropropane					23			23
2-Chlorotoluene					23			23
2-Ethyl-1-hexanol					2			2
4-Chlorotoluene					23			23
Acetone					30			30
Acrylonitrile					6			6
Benzene					29			29
Bromobenzene					23			23
Bromochloromethane					23			23
Bromodichloromethane					23			23
Bromoform					23			23
Bromomethane					23			23
BTEX					29			29
Carbon disulfide					18			18
Carbon tetrachloride					23			23
Chlorobenzene					23			23
Chlorodibromomethane					23			23
Chloroethane					29			29
Chloroform					23			23
Chloromethane					23			23
cis-1,2-Dichloroethene					23			23
cis-1,3-Dichloropropene					23			23
Dichlorodifluoromethane					23			23
Ethylbenzene					29			29
Ethylene dibromide					23			23
Isobutyl alcohol					2			2
Isopropylbenzene					29			29
m,p-Xylene					19			19
Methyl iodide					2			2
Methyl isobutyl ketone					22			22
Methyl n-butyl ketone					22			22
Methyl tert-butyl ether					16			16
Methylene bromide					23			23
Methylene chloride					23			23
Methylethyl ketone					28			28
n-Butylbenzene					23			23
n-Propylbenzene					27			27
o-Xylene					19			19
Sec-butylbenzene					28			28
Styrene					22			22
tert-Butylbenzene					23			23
Tetrachloroethene					23			23
Toluene					29			29
trans-1,2-Dichloroethene					23			23
trans-1,3-Dichloropropene					23			23
Trichloroethene					23			23
Trichlorofluoromethane					23			23
Vinyl chloride					23			23
Xylene					29			29

Table 2.3-6. Summary of Stormwater Sample Counts in the RI Data Set.

Analyte	Stormwater ^a				Additional Data from Other Parties	Stormwater Outfall Sediment Trap			Additional Data from Other Parties	Grand Total
	LWG	GE	Port of Portland Terminal 4	City's Basin 53		LWG	Port of Portland Terminal 4	Other Parties		
Petroleum										
Total Petroleum Hydrocarbons (Diesel)		8			80				88	
Total Petroleum Hydrocarbons (Diesel, dissolved)		8							8	
Total Petroleum Hydrocarbons (Gasoline)					46				46	
Total Petroleum Hydrocarbons (Heavy Oil)					70				70	
Oil And Grease					38				38	
Total Petroleum Hydrocarbons (Residual)					11				11	
Total Petroleum Hydrocarbons	8		30		83				121	
Total Petroleum Hydrocarbons (dissolved)		8							8	
Grand Total	28,098	3,535	10,515	284	8,888	8,528	1,492	12	61,352	

Notes:

^a GE and Terminal 4 stormwater data are considered part of the LWG's complete stormwater data set. Other stormwater data are available to confirm loading calculations in the fate and transport model. Sediment trap data collected by other parties are not included in Section 5.

BTEX - benzene, toluene, ethylbenzene, and total xylene

GE - General Electric

LWG - Lower Willamette Group

PAH - polycyclic aromatic hydrocarbon

PCB - polychlorinated biphenyl

PCDD/F - dioxin/furan

RI - remedial investigation

Total TCDD TEQ - sum of PCDD/F and PCB congener TCDD TEQ

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG						Other Parties		
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown	Grand Total
Conventionals									
Alkalinity	13	65	36	8	31			13	166
Calcium carbonate						76			76
Carbon dioxide					1	77			78
Chloride	13	65	36	8	31		76	13	242
Conductivity		51		7	26	41	97		222
Cyanide		11	10		3	13	11	13	61
Cyanide amenable to chlorination								13	13
Dissolved organic carbon								13	13
Dissolved oxygen					40	97			137
Ethane					1	77			78
Ethylene					1	77			78
Free cyanide								13	13
Methane					1	77			78
Nitrate						76			76
Nitrite						76			76
Oxidation-Reduction Potential		44			18	41	97		200
Perchlorate	5	17	12	1	7				42
pH	13	67	36	8	32	41	97		294
Phosphorus							74		74
Sulfate	13	65	36	8	31		76	13	242
Sulfide							76	13	89
Temperature						41	97		138
Total dissolved solids		50			19				69
Total organic carbon							76	13	89
Total suspended solids								55	55
Turbidity		51			18			36	105
Metals									
Aluminum	57	60	35	12	24				188
Antimony	57	60	35	12	24	13	11		212
Arsenic	60	64	39	19	31	13	11		237
Barium	57	60	35	12	24				188
Beryllium	57	60	35	12	24				188

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG						Other Parties			
	≤ 38 cm BML		> 38 cm BML		≤ 38 cm BML		≥ 38 cm BML			
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown	Grand Total	
Cadmium	57	60	35	12	24					188
Calcium	69	67	43	20	26				18	243
Chromium	62	65	39	13	25	13	11			228
Cobalt						13	11			24
Copper	50	53	39	19	25	13	11			210
Iron	57	60	35	12	24	13	15	18		234
Lead	60	64	39	19	31	13	11			237
Magnesium	69	67	43	20	26	13	11	18		267
Manganese	69	69	43	20	32	13	15	18		279
Mercury	57	60	35	12	24					188
Nickel	57	60	35	12	24	13	11			212
Potassium	69	67	43	20	26			18		243
Selenium	57	60	35	12	24	13	11			212
Silver	57	60	35	12	24	13	11			212
Sodium	69	67	43	20	26			18		243
Thallium	57	60	35	12	24					188
Titanium						13	11			24
Vanadium						13	11			24
Zinc	60	64	39	19	31	13	11			237
PCDD/Fs										
1,2,3,4,6,7,8-Heptachlorodibenzofuran	3	3								6
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3	3								6
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3	3								6
1,2,3,4,7,8-Hexachlorodibenzofuran	3	3								6
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	3	3								6
1,2,3,6,7,8-Hexachlorodibenzofuran	3	3								6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	3	3								6
1,2,3,7,8,9-Hexachlorodibenzofuran	3	3								6
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	3	3								6
1,2,3,7,8-Pentachlorodibenzofuran	3	3								6
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	3	3								6
2,3,4,6,7,8-Hexachlorodibenzofuran	3	3								6
2,3,4,7,8-Pentachlorodibenzofuran	3	3								6

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG				Other Parties			
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$	
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown Grand Total
2,3,7,8-Tetrachlorodibenzofuran	3	3						6
2,3,7,8-Tetrachlorodibenzo-p-dioxin	3	3						6
TCDD TEQ (ND = 0)	3	3						6
Total TCDD TEQ (ND = 0)	3	3						6
PCDD/F Homologs								
Heptachlorodibenzofuran homologs	3	3						6
Heptachlorodibenzo-p-dioxin homologs	3	3						6
Hexachlorodibenzofuran homologs	3	3						6
Hexachlorodibenzo-p-dioxin homologs	3	3						6
Octachlorodibenzofuran	3	3						6
Octachlorodibenzo-p-dioxin	3	3						6
Pentachlorodibenzofuran homologs	3	3						6
Pentachlorodibenzo-p-dioxin homologs	3	3						6
Tetrachlorodibenzofuran homologs	3	3						6
Tetrachlorodibenzo-p-dioxin homologs	3	3						6
Total PCDD/F	3	3						6
Pesticides								
2,4'-DDD	4	6	4	1	4			19
2,4'-DDE	4	6	4	1	4			19
2,4'-DDT	4	6	4	1	4			19
4,4'-DDD	8	10	8	1	4			31
4,4'-DDE	8	10	8	1	4			31
4,4'-DDT	8	10	8	1	4			31
Total DDD	8	10	8	1	4			31
Total DDx	8	10	8	1	4			31
Total DDE	8	10	8	1	4			31
Total DDT	8	10	8	1	4			31
Total 4,4'-DDx	8	10	8	1	4			31
Herbicides								
2,4,5-T	6	7	2	1	2			18
2,4-D	6	7	2	1	2			18
2,4-DB			2					2

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG						Other Parties			
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$			
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown	Grand Total	
Dalapon			2							2
Dicamba			2							2
Dichloroprop	6	7	2	1	2					18
Dinoseb			2							2
MCPA			2							2
MCPP			2							2
Silvex	6	7	2	1	2					18
Polycyclic Aromatic Hydrocarbons										
2-Methylnaphthalene	39	42	24	11	17			11	13	157
Acenaphthene	39	42	24	11	17	13	11	13	170	
Acenaphthylene	39	42	24	11	17	13	11	13	170	
Anthracene	39	42	24	11	17	13	11	13	170	
Benzo(a)anthracene	39	42	24	11	17	13	11	13	170	
Benzo(a)pyrene	39	42	24	11	17	13	11	13	170	
Benzo(b)fluoranthene	39	42	24	11	17	13	11	13	170	
Benzo(g,h,i)perylene	39	42	24	11	17	13	11	13	170	
Benzo(k)fluoranthene	39	42	24	11	17	13	11	13	170	
Chrysene	39	42	24	11	17	13	11	13	170	
Dibenzo(a,h)anthracene	39	42	24	11	17	13	11	13	170	
Fluoranthene	39	42	24	11	17	13	11	13	170	
Fluorene	39	42	24	11	17	13	11	13	170	
High Molecular Weight PAH	39	42	24	11	17	13	11	13	170	
Indeno(1,2,3-cd)pyrene	39	42	24	11	17	13	11	13	170	
Low Molecular Weight PAH	39	42	24	11	17	13	11	13	170	
Naphthalene	39	70	43	11	32	41	115	18	369	
Phenanthrene	39	42	24	11	17	13	11	13	170	
Pyrene	39	42	24	11	17	13	11	13	170	
Total cPAHs	39	42	24	11	17	13	11	13	170	
Total PAHs	39	41	24	11	17	13	11	13	169	

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG				Other Parties				
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown Grand Total	
Phthalates									
Bis(2-ethylhexyl) phthalate						11		11	
Butylbenzyl phthalate						11		11	
Dibutyl phthalate						11		11	
Diethyl phthalate						11		11	
Dimethyl phthalate						11		11	
Di-n-octyl phthalate						11		11	
Semivolatile Organic Compounds									
1,2,4-Trichlorobenzene	62		39		31	41	115	18	306
1,2-Dichlorobenzene	62		39		31	41	115	18	306
1,3-Dichlorobenzene	62		39		31	41	115	18	306
1,4-Dichlorobenzene	62		39		27	41	115	18	302
2,4-Dinitrotoluene							11		11
2,6-Dinitrotoluene							11		11
2-Chloronaphthalene							11		11
2-Nitroaniline							11		11
3,3'-Dichlorobenzidine							11		11
3-Nitroaniline							11		11
4-Bromophenyl phenyl ether							11		11
4-Chloroaniline							11		11
4-Chlorophenyl phenyl ether							11		11
4-Nitroaniline							11		11
Benzoic acid							11		11
Benzyl alcohol							11		11
Bis(2-chloroethoxy) methane							11		11
Bis(2-chloroethyl) ether							11		11
Bis(2-chloroisopropyl) ether							11		11
Carbazole							11		11
Dibenofuran	39	42	24	11	17		11	13	157
Hexachlorobenzene							11		11
Hexachlorobutadiene	62		39		31	41	115	18	306
Hexachlorocyclopentadiene							11		11
Hexachloroethane							11		11

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG				Other Parties			
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$	
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown Grand Total
Isophorone						11		11
Nitrobenzene						11		11
N-Nitrosodimethylamine						11		11
N-Nitrosodiphenylamine						11		11
N-Nitrosodipropylamine						11		11
Pyridine						11		11
Phenols								
2,4,5-Trichlorophenol						11		11
2,4,6-Trichlorophenol						11		11
2,4-Dichlorophenol						11		11
2,4-Dimethylphenol						11		11
2,4-Dinitrophenol						11		11
2-Chlorophenol						11		11
2-Methylphenol						11		11
2-Nitrophenol						11		11
3- and 4-Methylphenol Coelution						11		11
4,6-Dinitro-2-methylphenol						11		11
4-Chloro-3-methylphenol						11		11
4-Nitrophenol						11		11
Pentachlorophenol						11		11
Phenol						11		11
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	70	39		31	41	113	18	312
1,1,1-Trichloroethane	70	39		31	41	113	18	312
1,1,2,2-Tetrachloroethane	70	39		31	41	113	18	312
1,1,2-Trichloroethane	70	39		31	41	113	18	312
1,1-Dichloroethane	70	39		31	41	113	18	312
1,1-Dichloroethene	70	39		31	41	113	18	312
1,1-Dichloropropene					41	113		154
1,2,3-Trichlorobenzene					41	113		154
1,2,3-Trichloropropane	70	39		31	41	113	18	312
1,2,4-Trimethylbenzene					41	113		154
1,2-Dibromo-3-chloropropane					41	113		154

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG				Other Parties				
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown	Grand Total
1,2-Dichloroethane	70		39		31	41	113	18	312
1,2-Dichloropropane	70		39		31	41	113	18	312
1,3,5-Trimethylbenzene						41	113		154
1,3-Dichloropropane						41	113		154
1,4-Dichloro-trans-2-butene	70		39		31			18	158
1,4-Difluorobenzene		8			4				12
1-Methyl-4-isopropylbenzene						41	113		154
2,2-Dichloropropane						41	113		154
2-Chloroethyl vinyl ether	70		39		31			18	158
2-Chlorotoluene						41	113		154
4-Chlorotoluene						41	113		154
Acetone	70		39		31	41	113	18	312
Acrolein	70		39		31			18	158
Acrylonitrile	70		39		31	41	113	18	312
Benzene	70		43		31	41	113	18	316
Bromobenzene						41	113		154
Bromoform						41	113		312
Bromochloromethane	70		39		31	41	113	18	312
Bromodichloromethane	70		39		31	41	113	18	312
Bromoform	70		39		31	41	113	18	312
Bromomethane	70		39		31	41	113	18	312
BTEX	70		43		31	41	113	18	316
Carbon disulfide	70		39		31	41	113	18	312
Carbon tetrachloride	70		39		31	41	113	18	312
Chlorobenzene	70		39		31	41	113	18	312
Chlorodibromomethane	70		39		31	41	113	18	312
Chloroethane	70		39		31	41	113	18	312
Chloroform	70		39		31	41	113	18	312
Chloromethane	70		39		31	41	113	18	312
cis-1,2-Dichloroethene	62		35		24	41	113		275
cis-1,3-Dichloropropene	70		39		31	41	113	18	312
Dichlorodifluoromethane	70		39		31	41	113	18	312
Ethylbenzene	70		43		31	41	113	18	316
Ethylene dibromide	70		39		31	41	113	18	312
Isopropylbenzene	70		39		31	41	113	18	312

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG				Other Parties			
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$	
	Push Probe ^a filtered	Push Probe ^a unfiltered	Small Volume Peeper unfiltered	Push Probe ^a filtered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Push Probe ^a unfiltered	Unknown Grand Total
m,p-Xylene		70	43		31	41	113	18 316
Methyl iodide		70	39		31			18 158
Methyl isobutyl ketone		70	39		31	41	113	18 312
Methyl n-butyl ketone		70	39		31	41	113	18 312
Methyl tert-butyl ether		70	39		31	41	113	18 312
Methylene bromide		70	39		31	41	113	18 312
Methylene chloride		70	39		31	41	113	18 312
Methylethyl ketone		70	39		31	41	113	18 312
n-Butylbenzene						41	113	154
n-Propylbenzene						41	113	154
o-Xylene		70	43		31	41	113	18 316
Sec-butylbenzene						41	113	154
Styrene		70	39		31	41	113	18 312
tert-Butylbenzene						41	113	154
Tetrachloroethene		70	39		31	41	113	18 312
Toluene		70	43		31	41	113	18 316
trans-1,2-Dichloroethene		70	39		31	41	113	18 312
trans-1,3-Dichloropropene		70	39		31	41	113	18 312
Trichloroethene		70	39		31	41	113	18 312
Trichlorofluoromethane		70	39		31	41	113	18 312
Vinyl acetate		70	39		31			18 158
Vinyl chloride		70	39		31	41	113	18 312
Xylene		70	43		31	41	113	18 316
Petroleum								
Total Petroleum Hydrocarbons (Diesel)	36	38	21	12	17		11	135
Total Petroleum Hydrocarbons (Gasoline)		39	24		18			81
Lube Oil							11	11
Total Petroleum Hydrocarbons (Residual)	36	38	21	12	17			124
Total Petroleum Hydrocarbons	36	38	21	12	17			124
Grand Total	2,471	7,057	3,938	654	3,029	3,451	10,118	1,524
								32,242

Table 2.3-7. Summary of Transition Zone Water Sample Counts in the RI Data Set.

Analyte	LWG						Other Parties			
	$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$		$\leq 38 \text{ cm BML}$		$> 38 \text{ cm BML}$			
	Push Probe ^a	Small Volume Peeper	Push Probe ^a	Push Probe ^a	Push Probe ^a	Push Probe ^a	Push Probe ^a	Push Probe ^a	Unknown	Grand Total
Analyte	filtered	unfiltered	unfiltered	filtered	unfiltered	filtered	unfiltered	unfiltered		

Notes:

^a Push probes were collected using Trident® samplers.

BML - below mudline

BTEX - benzene, toluene, ethylbenzene, and total xylene

PAH - polycyclic aromatic hydrocarbon

PCDD/F - dioxin/furan

SVOC - semivolatile organic compound

Total TCDD TEQ - sum of PCDD/F and PCB congener TCDD TEQ

VOC - volatile organic compound

Table 2.3-8. Biota Sample and Analysis Summary for the RI Data Set.

Species	Tissue Type	Task Description	Number of Samples										
			Conven-tionals	Metals	Butyltins	Aroclors	PCB Congeners	PBDEs	PCDD/Fs	Homologs	Pesticides	PAHs	SVOCs
Black crappie	Fillet	Round 1 tissue samples	4	4		4					4		4
Black crappie	Fillet without skin	Round 1 tissue samples		4									
Black crappie	Whole body	Round 1 tissue samples	4	4		4	4		4	4	4		4
Brown bullhead	Fillet without skin	Round 1 tissue samples	6	12		6					6	6	6
Brown bullhead	Whole body	Round 1 tissue samples	9	9		9	9		9	9	9	9	9
Carp	Fillet	Round 3B biota	9	9	9		9	9	9	9	9	9	9
Carp	Body without fillet	Round 3B biota						9					
Carp	Fillet	Round 1 tissue samples	6	6		6					6		6
Carp	Fillet without skin	Round 1 tissue samples		6									
Carp	Whole body	Round 1 tissue samples	6	6		6	6		6	6	6		6
Carp	Whole body	Round 1A tissue samples		1									
Carp	Whole body (calculated)	Round 3B biota	9	9	9		9		9	9	9	9	9
Chinook (adult)	Fillet	ODHS/USEPA/ATSDR Fish Contaminant Study (ODHS et al. 2003)	3	3		3	3	3	3	3	3	3	3
Chinook (adult)	Fillet without skin	ODHS/USEPA/ATSDR Fish Contaminant Study (ODHS et al. 2003)		3			3	3	3	3			
Chinook (adult)	Whole body	ODHS/USEPA/ATSDR Fish Contaminant Study (ODHS et al. 2003)	4	4		4	4	4	4	4	4	4	4
Chinook (juvenile)	Stomach contents	Round 2A tissue, juvenile chinook					6		6		6	6	6
Chinook (juvenile)	Whole body	Round 2A tissue, juvenile chinook	12	12	11		12		12	12	12	12	12
Chinook (juvenile)	Whole body	Round 1A tissue samples	7	7		7					7	7	7
Clam	Body without shell	Round 2A benthic tissue	33	28	25		31		32	29	31	29	32
Clam	Body without shell	Round 3B biota	10	10	10		10	6	10	10	10	10	10
Clam	Body without shell	Round 1 tissue samples	3	3	2	3					3	3	3
Clam	Depurated w/o shell	Round 3B biota	5	5	4		5		5	5	5	5	5
Crayfish	Whole body	Round 3B biota	9	9	9		9		9	9	9	9	9
Crayfish	Whole body	Round 1 tissue samples	27	27		27	10		10	10	27	27	27
Lab clam	Body without shell	Round 2A benthic tissue	39	39	39		39		39	39	39	39	39
Lab clam	Body without shell	2005 O&M Dredge Sediment Characterization (Tetra Tech 2006)	14	14	14	14	14		11		14	14	14
Lamprey, ammocoetes	Whole body	Round 2B tissue, lamprey	1				1		1	1	1		1
Lamprey, ammocoetes	Whole body	Round 3 lamprey tissue composites	6	5	1		6		6	6	6	4	6
Lamprey, macrophthalmia	Whole body	Round 3 lamprey tissue composites	3	3			3		3	3	3	3	3
Largescale sucker	Whole body	Round 1 tissue samples	6	6		6				6	6	6	6
<i>Lumbriculus variegatus</i>	Whole body	Round 2A benthic tissue	39	39	39		39		39	39	39	39	39
<i>Lumbriculus variegatus</i>	Whole body	2005 O&M Dredge Sediment Characterization (Tetra Tech 2006)	14	14	14	14	14		11		14	14	14
Multiplate invertebrates	Whole body	Round 2A tissue, multiplate	2	2			7		7	7	7		7
Mussel	Body without shell	Round 2B tissue, freshwater mussel	7	7	7		7		7	7	7	7	7
Northern pikeminnow	Whole body	Round 1 tissue samples	6	6		6				6		6	
Osprey	Whole egg	USEPA's PBDEs in osprey eggs	15	15		15	15	15	15	10	15		15
Pacific lamprey	Whole body	ODHS/USEPA/ATSDR Fish Contaminant Study (ODHS et al. 2003)	4	4		4	4	4	4	4	4	4	4
Pearmouth	Whole body	Round 1 tissue samples	4	4		4					4		4
Sculpin	Whole body	Round 3B biota	16	16	16		16		16	16	16	16	16
Sculpin	Whole body	Round 1 tissue samples	26	27		26	9		9	9	26	26	26
Smallmouth bass	Fillet	Round 3B biota	18	18	18		18	18	18	18	18	18	18
Smallmouth bass	Body without fillet	Round 3B biota						18			5		5
Smallmouth bass	Fillet	Round 1 tissue samples	5	5		5					5		5
Smallmouth bass	Fillet without skin	Round 1 tissue samples		5									
Smallmouth bass	Whole body	Round 1 tissue samples	20	20		20	20		20	20	20	20	20
Smallmouth bass	Whole body (calculated)	Round 3B biota	18	18	18		18		18	18	18	18	18
Sturgeon	Fillet without skin	ODHS/USEPA/ATSDR Fish Contaminant Study (ODHS et al. 2003)	5	5		5	5	5	5	5	5	5	5
Sturgeon (juvenile)	Stomach contents	Round 3A juvenile sturgeon	3	3			1		1		1	3	1
Sturgeon (juvenile)	Whole body	Round 3A juvenile sturgeon	15	15	15		15		15	15	15	15	15

Notes:

ATSDR - Agency for Toxic Substances and Disease Registry
 USEPA - U.S. Environmental Protection Agency
 ODHS - Oregon Department of Human Services
 PAH - polycyclic aromatic hydrocarbon
 PBDE - polybrominated diphenyl ether

PCB - polychlorinated biphenyl
 PCDD/Fs - dioxins/furans
 RI - remedial investigation
 SVOC - semivolatile organic compound

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead			Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macrothalmia	Largescale sucker	<i>Lumbriculus variegatus</i>	Multiplate invertebrates	Mussel	Northern pike minnow	Pearmouth	Sculpin	Smallmouth bass			Sturgeon, juvenile		Grand Total	
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body	body without shell	depurated w/o shell	whole body	whole body	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	whole body	body without fillet	fillet without skin	whole body	stomach contents	whole body			
Conventional																															
Lipids	4		4	6	9	9	15		6		19	45	5	36	35	7	3	6	35		7	6	4	42	18	23		20	3	15	382
Total solids	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Metals																															
Aluminum	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Antimony	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Arsenic	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Barium																														0	
Beryllium																														0	
Cadmium	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Calcium																														0	
Chromium	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Cobalt																														0	
Copper	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Iron																														0	
Lead	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Magnesium																														0	
Manganese	4		4	6	9	9	15		6		7	13	5	36																233	
Mercury	4		4	6	9	9	15		6		19	38	4	36	35	4	2	6	34		7	6	4	43	18	18	5	20	3	15	371
Nickel	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Potassium																														0	
Selenium	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Silver	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Sodium																														0	
Thallium	4		4	6	9	9	15		6		7	13	5	36																233	
Vanadium																														0	
Zinc	4		4	6	9	9	15		6		19	41	5	36	35	5	3	6	35	2	7	6	4	42	18	23		20	3	15	378
Butyltins																															
Butyltin ion												9	9																	15	224
Dibutyltin ion												9	9																	15	224
Tetrabutyltin												9	9																	15	224
Tributyltin ion												9	9																	15	224
PCB Aroclors																															
Aroclor 1016	4		4	6	9		6		6		7	3		27																	139
Aroclor 1221	4		4	6	9		6		6		7	3		27																	139
Aroclor 1232	4		4	6	9		6		6		7	3		27																	139
Aroclor 1242	4		4	6	9		6		6		7	3		27																	139
Aroclor 1248	4		4	6	9		6		6		7	3		27																	139
Aroclor 1254	4		4	6	9		6		6		7	3	</td																		

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead			Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macrothalmia	Largescale sucker	<i>Lumbriculus variegatus</i>	Multiplate invertebrates	Mussel	Northern pike minnow	Pearmouth	Sculpin	Smallmouth bass			Sturgeon, juvenile		Grand Total	
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body	body without shell	deparated w/o shell	whole body	body without shell	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body			
PCB025			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB026 & 029			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB027			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB028																														0	
PCB031			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB032			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB033																														0	
PCB034			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB035			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB036			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB037			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB038			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB039			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB040 & 041 & 071			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB042			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB043			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB044																													0		
PCB044 & 047 & 065			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB045 & 051			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB046			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB048			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB049																													0		
PCB049 & 069			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB050 & 053			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB052			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB054			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB055			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB056			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB057			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB058			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB059 & 062 & 075			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB060			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB061 & 070 & 074 & 076			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB063			4		9	9	9		6	6																					

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead			Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macrothalmia	Largescale sucker	<i>Lumbriculus variegatus</i>	Multiplate invertebrates	Mussel	Northern pike minnow	Pearmouth	Sculpin	Smallmouth bass			Sturgeon, juvenile		Grand Total	
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body	body without shell	deparated w/o shell	whole body	body without shell	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body			
PCB107 & 124			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB109			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB110																														0	
PCB110 & 115			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB111			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB112			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB114			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB118			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB119																														0	
PCB120			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB121			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB122			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB123			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB126			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB127			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB128																													0		
PCB128 & 166			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB129 & 138 & 160 & 163			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB130			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB131			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB132			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB133			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB134 & 143			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB135 & 151 & 154			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB136			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB137			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB138																													0		
PCB139 & 140			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB141			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB142			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB144			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB145			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB146			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15	311
PCB147 & 149			4		9	9	9		6	6	12	41																			

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead		Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macroptalmia	Largescale sucker	Lumbriculus variegatus	Multiplate invertebrates	Mussel	Northern pike minnow	Pearmouth	Sculpin	Smallmouth bass			Sturgeon, juvenile	Grand Total		
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body	without shell	depurated w/o shell	whole body	body without shell	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	whole body	body without fillet	fillet without skin	whole body	stomach contents	whole body		
PCB183 & 185			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB184			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB186			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB187			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB188			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB189			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB190			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB191			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB192			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB194			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB195			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB196			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB197 & 200			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB198 & 199			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB201			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB202			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB203			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB204			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB205			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB206			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB207			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB208			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PCB209			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
Total PCB Congeners			4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7				25	18	18	20	1	15 311
PBDE Congeners																														
PBDE001																													0	
PBDE002																													0	
PBDE003																													0	
PBDE007																													0	
PBDE008 & PBDE011																													0	
PBDE010																													0	
PBDE012																													0	
PBDE012 & 013																													0	
PBDE013																													0	
PBDE015																													0	
PBDE017																													0	
PBDE017 & 025																													0	
PBDE025																													0	
PBDE028 & PBDE033																													0	
PBDE030																													0	
PBDE032																													0	
PBDE035																													0	
PBDE037																													0	
PBDE047																													0	
PBDE049																													0	
PBDE051																													0	
PBDE066																													0	
PBDE071																													0	
PBDE075																													0	
PBDE077																													0	
PBDE079																													0	
PBDE085																													0	
PBDE099																													0	
PBDE100																														

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead			Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macrothalmia	Largescale sucker	Lumbriculus variegatus	Multiplate invertebrates	Mussel	Northern pike minnow	Pearmouth	Sculpin	Smallmouth bass			Sturgeon, juvenile		Grand Total
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body	body without shell	depurated w/o shell	whole body	body without shell	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body		
PBDE206																													0	
PBDE207																													0	
PBDE208																													0	
PBDE209																													0	
PCB Homologs																														
Dichlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Heptachlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Hexachlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Monochlorobiphenyl homologs		2		2	9	9		5	6	12	38	5	19	35	6	3		32	7	7			23	18	18	10	1	15	282	
Nonachlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Octachlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Pentachlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Tetrachlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
Trichlorobiphenyl homologs		4		9	9	9		6	6	12	41	5	19	35	7	3		35	7	7			25	18	18	20	1	15	311	
PCDD/Fs																														
1,2,3,4,6,7,8-Heptachlorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,4,7,8,9-Heptachlorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,4,7,8-Hexachlorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,6,7,8-Hexachlorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8,9-Hexachlorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8,9-Hexachlorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8-Pentaclorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8-Pentaclorodibenzo-p-dioxin		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8-Pentaclorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8-Tetraclorodibenzofuran		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
1,2,3,7,8-Tetraclorodibenzo-p-dioxin		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
TCDD TEQ (ND = 0)		4		9	9	9		6	6	12	42	5	19	35	7	3		35	7	7			25	18	18	20		1	15	312
PCDD/F Homologs																														
Heptachlorodibenzofuran homologs		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
Heptachlorodibenzo-p-dioxin homologs		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
Hexachlorodibenzofuran homologs		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
Hexachlorodibenzo-p-dioxin homologs		4		9	9	9		6	12	39	5	19	35	7	3		35	7	7			25	18	18	20		15	302		
Octachlorodibenzofuran		4																												

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead		Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macroth almia	Largescale sucker	Lumbriculus variegatus	Multiplate invertebrates	Mussel	Northern pike minnow	Pearmouth	Sculpin	Smallmouth bass			Sturgeon, juvenile	Grand Total			
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet without skin	whole body	stomach contents	whole body	body without shell	deparated w/o shell	whole body	body without shell	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	whole body	body without fillet	fillet without skin	whole body	stomach contents	whole body				
Oxychlordane	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total Chlordanes	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total Endosulfan	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total DDD	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total DDX	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total DDE	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total DDT	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
Total 4,4'-DDx	4		4	6	9		6		6	6	19	34		27	35	7	3	6	35	7		6	4	26		5		20			275
Toxaphene	4		4	6	9		6		6	6	19	3		27								6	4	26	5		20			151	
trans-Chlordanes	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
trans-Nonachlor	4		4	6	9	9	15		6	6	19	44	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	392
PAHs																															
1-Methylnaphthalene						9	9																					16	18	18	
2-Methylnaphthalene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Acenaphthene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Acenaphthylene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Anthracene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Benzo(a)anthracene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Benzo(a)pyrene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Benzo(b)fluoranthene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Benzo(b+k)fluoranthene																													0		
Benzo(e)pyrene																													15		
Benzo(g,h,i)perylene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Benzo(+k)fluoranthene																													6		
Benzo(k)fluoranthene						6	9	9	9	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	347	
C1-Chrysene																													15		
C1-Dibenzothiophene																													15		
C1-Fluoranthene/pyrene																													15		
C1-Fluorene																													15		
C1-Phenanthrene/anthracene																													15		
C2-Chrysene																													15		
C2-Dibenzothiophene																													15		
C2-Fluoranthene/pyrene																													15		
C2-Fluorene																													15		
C2-Naphthalene																													15		
C2-Phenanthrene/anthracene																													15		
C3-Chrysene																													15		
C3-Dibenzothiophene																													15		
C3-Fluoranthene/pyrene																													15		
C3-Fluorene																													15		
C3-Naphthalene																													15		
C3-Phenanthrene/anthracene																													15		
C4-Chrysene																													15		
C4-Naphthalene																													15		
C4-Phenanthrene/anthracene																													15		
Chrysene	6	9	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7						42	18	18	20	3	15	353	
Dibenzo(a,h)anthracene	6	9	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7						42	18	18	20	3	15	353	
Dibenzothiophene						9	9			10																16	18	18	85		
Fluoranthene						6	9	9	9	6	6	19	42	5	36	35	4	3	6	35		7			42	18	18	20	3	15	353
Fluorene						6	6	19	42	5	36	35	4	3	6	35		7						42	18	18	20	3	15	353	
High Molecular Weight PAH						6	9	9	9	6	6	19	42	5	36	35															

Table 2.3-9a. Summary of Biota Sample Counts in RI Data Set (LWG Data).

Analyte	Black crappie			Brown bullhead			Carp			Chinook, juvenile		Clam		Crayfish	Lab clam	Lamprey, ammocoetes	Lamprey, macrothalmia	Largescale sucker	<i>Lumbriculus variegatus</i>	Multiplate invertebrates	Mussel	Northern pike minnow	Pearl m. / Peacock sh.	Sculpin	Smallmouth bass			Sturgeon, juvenile		Grand Total			
	fillet	fillet without skin	whole body	fillet without skin	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body	body without shell	deparated w/o shell	whole body	body without shell	whole body	whole body	whole body	whole body	body without shell	whole body	whole body	body without fillet	fillet	fillet without skin	whole body	stomach contents	whole body					
1,2-Diphenylhydrazine				6	9			6		7	3	27			6															20		110	
1,3-Dichlorobenzene				6	9	9	9	9	6	15	41	4	36	35	4	1	6	35		7				42	18	18		20		15	336		
1,4-Dichlorobenzene				6	9	9	9	9	6	15	41	4	36	35	4	1	6	35		7				42	18	18		20		15	336		
2,4-Dinitrotoluene				6	9	9	9	9	6	7	13	4	36				6													20		203	
2,6-Dinitrotoluene				6	9	9	9	9	6	7	13	4	36				6													20		203	
2-Chloronaphthalene				6	9	9	9	9	6	7	13	4	36				6													20		203	
2-Nitroaniline				6	9	9	9	9	6	7	13	4	36				6													20		203	
3,3'-Dichlorobenzidine				6	9	9	9	9	6	7	13	4	36				6													20		203	
3-Nitroaniline				6	9	9	9	9	6	7	13	4	36				6													20		203	
4-Bromophenyl phenyl ether				6	9	9	9	9	6	7	13	4	36				6													20		203	
4-Chloroaniline				6	9	9	9	9	6	7	13	4	36				6													20		203	
4-Chlorophenyl phenyl ether				6	9	9	9	9	6	7	13	4	36				6													20		203	
4-Nitroaniline				6	9	9	9	9	6	7	13	4	36				6													20		203	
Aniline				6	9	9	9	9	5		10	4	36																16	18	18	20	160
Azobenzene				6	9	9	9	9	6	7	13	4	36				6											42	18	18	20	203	
Benzoic acid				6	9	9	9	9	6		10	4	36															16	18	18	20	161	
Benzyl alcohol				6	9	9	9	9	6	15	41	4	36	35	4	1	6	35		7				42	18	18	20	15	336				
Bis(2-chloro-1-methylethyl) ether				6	9				6	7	3		27				6											26			20	110	
Bis(2-chlorooethoxy) methane				6	9	9	9	9	6	7	13	4	36				6										42	18	18	20	203		
Bis(2-chloroethyl) ether				6	9	9	9	9	6	7	13	4	36				6										42	18	18	20	203		
Bis(2-chloroisopropyl) ether						9	9				10	4	9														16	18	18		93		
Carbazole				6	9				6	7	3		27				6										26				20	110	
Dibenzofuran				6	9	9	9	9	6	19	42	5	36	35			6	35									42	18	18	20	315		
Diphenyl																															0		
Hexachlorobenzene	4	4	6	9	9	9	15	6	6	19	45	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	393			
Hexachlorobutadiene	4	4	6	9	9	9	15	6	6	19	41	5	36	35	7	3	6	35	7	7	6	4	42	18	23		20	1	15	389			
Hexachlorocyclopentadiene				6	9	9	9	9	6	7	13	4	36				6										42	18	18	20	203		
Hexachloroethane	4	4	6	9	9	9	15	6	15	41	4	36	35	4	1	6	35		7	6	4	42	18	23		20	1	15	365				
Isophorone				6	9	9	9	9	6	10	4	36														16	18	18	20	161			
Nitrobenzene				6	9	9	9	9	6	7	13	4	36				6										42	18	18	20	203		
N-Nitrosodimethylamine				6	9	9	9	9	6	7	13	4	36				6										42	18	18	20	203		
N-Nitrosodiphenylamine				6	9	9	9	9	6	15	41	4	36	35	4	1	6	35		7				42	18	18	20	15	336				
N-Nitrosodipropylamine				6	9	9	9	9	6	7	13	4	36				6										42	18	18	20	203		
Retene																															0		
Phenols																																	
2,3,4,5-Tetrachlorophenol																																	

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					fillet	whole egg	fillet	
Conventionals															
Lipids	3		4	11	11	4	5					15			53
Moisture												15			15
Total solids				11	11										22
Metals															
Aluminum	3		4			4	5								16
Antimony	3		4	11	11	4	5								38
Arsenic	3		4	11	11	4	5								38
Barium	3		4			4	5								16
Beryllium	3		4			4	5								16
Cadmium	3		4	11	11	4	5								38
Calcium	3		4			4	5								16
Chromium	3		4	11	11	4	5								38
Cobalt	3		4			4	5								16
Copper	3		4	11	11	4	5								38
Iron	3		4			4	5								16
Lead	3		4	11	11	4	5								38
Magnesium	3		4			4	5								16
Manganese	3		4			4	5								16
Mercury		3	4	11	11	4	5					15			53
Nickel	3		4	11	11	4	5								38
Potassium	3		4			4	5								16
Selenium	3		4			4	5								16
Silver	3		4	11	11	4	5								38
Sodium	3		4			4	5								16
Thallium	3		4			4	5								16
Vanadium	3		4			4	5								16
Zinc	3		4	11	11	4	5								38
Butyltins															
Butyltin ion					11	11									22
Dibutyltin ion					11	11									22
Tetrabutyltin					11	11									22
Tributyltin ion					11	11									22
PCB Aroclors															
Aroclor 1016	3		4	11	11	4	5								38
Aroclor 1221	3		4	11	11	4	5								38
Aroclor 1232	3		4	11	11	4	5								38
Aroclor 1242	3		4	11	11	4	5								38
Aroclor 1248	3		4	11	11	4	5								38
Aroclor 1254	3		4	11	11	4	5								38
Aroclor 1254 + Aroclor 1260												15			15
Aroclor 1260	3		4	11	11	4	5					15			53
Aroclor 1262	3		4	11	11	4	5								38
Aroclor 1268	3		4	11	11	4	5								38

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					fillet	whole egg	fillet	
Total PCB Aroclors	3		4	11	11	4	5					15			53
PCB Congeners															
Total PCB congener TEQ (ND = 0)	3	3	4	11	11	4	5					15			56
PCB001	3	3	4	11	11	4	5					10			51
PCB002	3	3	4			4	5					10			29
PCB003	3	3	4			4	5					10			29
PCB004	3	3	4			4	5					10			29
PCB005	3	3	4	11	11	4	5					10			51
PCB006	3	3	4			4	5					10			29
PCB007	3	3	4			4	5					10			29
PCB008	3	3	4	11	11	4	5					10			51
PCB009	3	3	4			4	5					10			29
PCB010	3	3	4			4	5					10			29
PCB011	3	3	4			4	5					10			29
PCB012 & 013	3	3	4			4	5					10			29
PCB014	3	3	4			4	5					10			29
PCB015	3	3	4			4	5					10			29
PCB016	3	3	4			4	5					10			29
PCB017	3	3	4			4	5					10			29
PCB018				11	11										22
PCB018 & 030	3	3	4			4	5					10			29
PCB019	3	3	4			4	5					10			29
PCB020 & 028	3	3	4			4	5					10			29
PCB021 & 033	3	3	4			4	5					10			29
PCB022	3	3	4			4	5					10			29
PCB023	3	3	4			4	5					10			29
PCB024	3	3	4			4	5					10			29
PCB025	3	3	4			4	5					10			29
PCB026 & 029	3	3	4			4	5					10			29
PCB027	3	3	4			4	5					10			29
PCB028				11	11										22
PCB028 & 031												5			5
PCB031	3	3	4	11	11	4	5					10			51
PCB032	3	3	4			4	5					10			29
PCB033				11	11										22
PCB034	3	3	4			4	5					10			29
PCB035	3	3	4			4	5					10			29
PCB036	3	3	4			4	5					10			29
PCB037	3	3	4	11	11	4	5					10			51
PCB038	3	3	4			4	5					10			29
PCB039	3	3	4			4	5					10			29
PCB040 & 041 & 071	3	3	4			4	5					10			29
PCB042	3	3	4			4	5					15			34
PCB043	3	3	4			4	5					10			29

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					fillet	whole egg		
PCB044					11	11						5			27
PCB044 & 047 & 065	3	3	4				4	5				10			29
PCB045 & 051	3	3	4				4	5				10			29
PCB046	3	3	4				4	5				10			29
PCB048	3	3	4				4	5				10			29
PCB049					11	11						5			27
PCB049 & 069	3	3	4				4	5				10			29
PCB050 & 053	3	3	4				4	5				10			29
PCB052	3	3	4	11	11	4	5					15			56
PCB054	3	3	4				4	5				10			29
PCB055	3	3	4				4	5				10			29
PCB056	3	3	4	11	11	4	5					10			51
PCB056 & 060												5			5
PCB057	3	3	4				4	5				10			29
PCB058	3	3	4				4	5				10			29
PCB059 & 062 & 075	3	3	4				4	5				10			29
PCB060	3	3	4	11	11	4	5					10			51
PCB061 & 070 & 074 & 076	3	3	4				4	5				10			29
PCB063	3	3	4				4	5				10			29
PCB064	3	3	4				4	5				15			34
PCB066	3	3	4	11	11	4	5					10			51
PCB066 & 095												5			5
PCB067	3	3	4				4	5				10			29
PCB068	3	3	4				4	5				10			29
PCB070					11	11									22
PCB070 & 076												5			5
PCB072	3	3	4				4	5				10			29
PCB073	3	3	4				4	5				10			29
PCB074					11	11						5			27
PCB077	3	3	4	11	11	4	5					10			51
PCB078	3	3	4				4	5				10			29
PCB079	3	3	4				4	5				10			29
PCB080	3	3	4				4	5				10			29
PCB081	3	3	4	11	11	4	5					10			51
PCB082	3	3	4				4	5				10			29
PCB083 & 099	3	3	4				4	5				10			29
PCB084	3	3	4				4	5				10			29
PCB085 & 116 & 117	3	3	4				4	5				10			29
PCB086 & 087 & 097 & 108 & 119 & 125	3	3	4				4	5				10			29
PCB087						11	11					5			27
PCB088 & 091	3	3	4				4	5				10			29
PCB089	3	3	4				4	5				10			29
PCB090						11	11								22
PCB090 & 101 & 113	3	3	4				4	5				10			29

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total
	fillet	fillet without skin	whole body										
PCB092	3	3	4			4	5			10			29
PCB093 & 095 & 098 & 100 & 102	3	3	4			4	5			10			29
PCB094	3	3	4			4	5			10			29
PCB095				11	11								22
PCB096	3	3	4			4	5			10			29
PCB097				11	11					5			27
PCB099				11	11					5			27
PCB101				11	11					5			27
PCB103	3	3	4			4	5			10			29
PCB104	3	3	4			4	5			10			29
PCB105	3	3	4	11	11	4	5			15			56
PCB106	3	3	4			4	5			10			29
PCB107 & 124	3	3	4			4	5			10			29
PCB109	3	3	4			4	5			10			29
PCB110				11	11					5			27
PCB110 & 115	3	3	4			4	5			10			29
PCB111	3	3	4			4	5			10			29
PCB112	3	3	4			4	5			10			29
PCB114	3	3	4	11	11	4	5			10			51
PCB118	3	3	4	11	11	4	5			15			56
PCB119				11	11								22
PCB120	3	3	4			4	5			10			29
PCB121	3	3	4			4	5			10			29
PCB122	3	3	4			4	5			10			29
PCB123	3	3	4	11	11	4	5			10			51
PCB126	3	3	4	11	11	4	5			10			51
PCB127	3	3	4			4	5			10			29
PCB128				11	11					5			27
PCB128 & 166	3	3	4			4	5			10			29
PCB129 & 138 & 160 & 163	3	3	4			4	5			10			29
PCB130	3	3	4			4	5			10			29
PCB131	3	3	4			4	5			10			29
PCB132	3	3	4	11	11	4	5			10			51
PCB133	3	3	4			4	5			10			29
PCB134 & 143	3	3	4			4	5			10			29
PCB135 & 151 & 154	3	3	4			4	5			10			29
PCB136	3	3	4			4	5			10			29
PCB137	3	3	4			4	5			10			29
PCB138				11	11					5			27
PCB139 & 140	3	3	4			4	5			10			29
PCB141	3	3	4	11	11	4	5			15			56
PCB142	3	3	4			4	5			10			29
PCB144	3	3	4			4	5			10			29
PCB145	3	3	4			4	5			10			29

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					fillet	whole egg	fillet	
PCB146	3	3	4			4	5					15			34
PCB147 & 149	3	3	4			4	5					10			29
PCB148	3	3	4			4	5					10			29
PCB149				11	11							5			27
PCB150	3	3	4			4	5					10			29
PCB151				11	11							5			27
PCB152	3	3	4			4	5					10			29
PCB153				11	11							5			27
PCB153 & 168	3	3	4			4	5					10			29
PCB155	3	3	4			4	5					10			29
PCB156	3	3	4	11	11	4	5					10			51
PCB156 & 157															0
PCB156 & 171												5			5
PCB157	3	3	4	11	11	4	5					10			51
PCB158	3	3	4	11	11	4	5					15			56
PCB159	3	3	4			4	5					10			29
PCB161	3	3	4			4	5					10			29
PCB162	3	3	4			4	5					10			29
PCB164	3	3	4			4	5					10			29
PCB165	3	3	4			4	5					10			29
PCB166				11	11										22
PCB167	3	3	4	11	11	4	5					10			51
PCB168				11	11										22
PCB169	3	3	4	11	11	4	5					10			51
PCB170	3	3	4	11	11	4	5					10			51
PCB170 & 190												5			5
PCB171 & 173	3	3	4			4	5					10			29
PCB172	3	3	4			4	5					15			34
PCB174	3	3	4	11	11	4	5					15			56
PCB175	3	3	4			4	5					10			29
PCB176	3	3	4			4	5					10			29
PCB177	3	3	4	11	11	4	5					15			56
PCB178	3	3	4			4	5					15			34
PCB179	3	3	4			4	5					15			34
PCB180				11	11							5			27
PCB180 & 193	3	3	4			4	5					10			29
PCB181	3	3	4			4	5					10			29
PCB182	3	3	4			4	5					10			29
PCB183				11	11							5			27
PCB183 & 185	3	3	4			4	5					10			29
PCB184	3	3	4	11	11	4	5					10			51
PCB186	3	3	4			4	5					10			29
PCB187	3	3	4	11	11	4	5					15			56
PCB188	3	3	4			4	5					10			29

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total
	fillet	fillet without skin	whole body										
PCB189	3	3	4	11	11	4	5			10			51
PCB190	3	3	4			4	5			10			29
PCB191	3	3	4			4	5			10			29
PCB192	3	3	4			4	5			10			29
PCB194	3	3	4	11	11	4	5			15			56
PCB195	3	3	4	11	11	4	5			15			56
PCB196	3	3	4			4	5			10			29
PCB197 & 200	3	3	4			4	5			10			29
PCB198 & 199	3	3	4			4	5			10			29
PCB200										5			5
PCB201	3	3	4	11	11	4	5			15			56
PCB202	3	3	4			4	5			10			29
PCB203	3	3	4	11	11	4	5			15			56
PCB204	3	3	4			4	5			10			29
PCB205	3	3	4			4	5			10			29
PCB206	3	3	4	11	11	4	5			15			56
PCB207	3	3	4			4	5			10			29
PCB208	3	3	4			4	5			10			29
PCB209	3	3	4	11	11	4	5			10			51
Total PCB Congeners	3	3	4	11	11	4	5			15			56
PBDE Congeners													
PBB101										15			15
PBDE001	3	3	4			3							13
PBDE002	3	3	4			3							13
PBDE003	3	3	4			3							13
PBDE007	3	3	4			3	1						14
PBDE008 & PBDE011	3	3	4			3	1						14
PBDE010	3	3	4			3	1						14
PBDE012	3	3	4			3							13
PBDE012 & 013							1						1
PBDE013	3	3	4			3							13
PBDE015	3	3	4			3	1						14
PBDE017	3	3	4			3				15			28
PBDE017 & 025						1	5						6
PBDE025	3	3	4			3							13
PBDE028								9	9	6	15	18	75
PBDE028 & PBDE033	3	3	4			4	5						19
PBDE030	3	3	4			4	5						19
PBDE032	3	3	4			4	5						19
PBDE035	3	3	4			4	5						19
PBDE037	3	3	4			4	5						19
PBDE047	3	3	4			4	5	9	9	6	15	18	94
PBDE049	3	3	4			4	5			15			34
PBDE051						1	5						6

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total
	fillet	fillet without skin	whole body										
PBDE066	3	3	4			4	5			15			34
PBDE071	3	3	4			4	5						19
PBDE075	3	3	4			4	5						19
PBDE077	3	3	4			4	5						19
PBDE079						1	5						6
PBDE085	3	3	4			4	5			15			34
PBDE099	3	3	4			4	5	9	9	6	15	18	94
PBDE100	3	3	4			4	5	9	9	6	15	18	94
PBDE105	3	3	4			4	5						19
PBDE116	3	3	4			4	5						19
PBDE119	3	3	4			3							13
PBDE119 & 120						1	5						6
PBDE126	3	3	4			4	5						19
PBDE128						1	5						6
PBDE138										15			15
PBDE138 & PBDE166	3	3	4			4	5						19
PBDE140	3	3	4			4	5						19
PBDE153	3	3	4			4	5	9	9	6	15	18	94
PBDE154	3	3	4			4	5	9	9	6		18	79
PBDE154 & PBB153											15		15
PBDE155	3	3	4			4	5						19
PBDE181	3	3	4			4	5						19
PBDE183	3	3	4			4	5	9	9	6	15	18	94
PBDE190	3	3	4			4	5				15		34
PBDE203						1	5						6
PBDE206	3	3	4			4	5						19
PBDE207	3	3	4			4	5						19
PBDE208	3	3	4			4	5						19
PBDE209	3	3	4			4	5	9	9	6	15	18	94
PCB Homologs													
Dichlorobiphenyl homologs	3	3	4			4	5			10			29
Heptachlorobiphenyl homologs	3	3	4			4	5			15			34
Hexachlorobiphenyl homologs	3	3	4			4	5			15			34
Monochlorobiphenyl homologs	3	3	4			4	5			10			29
Nonachlorobiphenyl homologs	3	3	4			4	5			15			34
Octachlorobiphenyl homologs	3	3	4			4	5			15			34
Pentachlorobiphenyl homologs	3	3	4			4	5			15			34
Tetrachlorobiphenyl homologs	3	3	4			4	5			15			34
Trichlorobiphenyl homologs	3	3	4			4	5			15			34

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					whole egg	Bass fillet		
PCDD/Fs															
1,2,3,4,6,7,8-Heptachlorodibenzofuran	3	3	4			4	5					10			29
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3	3	4			4	5					10			29
1,2,3,4,7,8-Hexachlorodibenzofuran	3	3	4			4	5					10			29
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
1,2,3,6,7,8-Hexachlorodibenzofuran	3	3	4			4	5					10			29
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
1,2,3,7,8,9-Hexachlorodibenzofuran	3	3	4			4	5					10			29
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
1,2,3,7,8-Pentachlorodibenzofuran	3	3	4			4	5					10			29
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
2,3,4,6,7,8-Hexachlorodibenzofuran	3	3	4			4	5					10			29
2,3,4,7,8-Pentachlorodibenzofuran	3	3	4			4	5					10			29
2,3,7,8-Tetrachlorodibenzofuran	3	3	4			4	5					10			29
2,3,7,8-Tetrachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
TCDD TEQ (ND = 0)	3	3	4			4	5					10			29
Total TCDD TEQ (ND = 0)	3	3	4	11	11	4	5					15			56
PCDD/F Homologs															
Heptachlorodibenzofuran homologs	3	3	4			4	5					10			29
Heptachlorodibenzo-p-dioxin homologs	3	3	4			4	5					10			29
Hexachlorodibenzofuran homologs	3	3	4			4	5					10			29
Hexachlorodibenzo-p-dioxin homologs	3	3	4			4	5					10			29
Octachlorodibenzofuran	3	3	4			4	5					10			29
Octachlorodibenzo-p-dioxin	3	3	4			4	5					10			29
Pentachlorodibenzofuran homologs	3	3	4			4	5					10			29
Pentachlorodibenzo-p-dioxin homologs	3	3	4			4	5					10			29
Tetrachlorodibenzofuran homologs	3	3	4			4	5					10			29
Tetrachlorodibenzo-p-dioxin homologs	3	3	4			4	5					10			29
Total PCDD/F	3	3	4			4	5					10			29

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					whole egg	fillet		
Pesticides															
2,4'-DDD	3		4	11	11	4	5					5			43
2,4'-DDE	3		4	11	11	4	5					5			43
2,4'-DDT	3		4	11	11	4	5					5			43
4,4'-DDD	3		4	11	11	4	5					15			53
4,4'-DDE	3		4	11	11	4	5					15			53
4,4'-DDT	3		4	11	11	4	5					15			53
Aldrin	3		4	11	11	4	5					5			43
alpha-Endosulfan	3		4	11	11	4	5					5			43
alpha-Hexachlorocyclohexane	3		4	11	11	4	5					15			53
beta-Endosulfan	3		4	11	11	4	5					5			43
beta-Hexachlorocyclohexane	3		4	11	11	4	5					15			53
Chlorothalonil												15			15
cis-Chlordane	3		4	11	11	4	5					15			53
cis-Nonachlor				11	11							15			37
Dacthal												15			15
delta-Hexachlorocyclohexane	3		4	11	11	4	5					5			43
Dieldrin	3		4	11	11	4	5					15			53
Dimethyl tetrachlorophthalate												15			15
Endosulfan sulfate	3		4	11	11	4	5					5			43
Endrin	3		4	11	11	4	5					5			43
Endrin aldehyde	3		4	11	11	4	4					5			42
Endrin ketone	3		4	11	11	4	5					5			43
gamma-Hexachlorocyclohexane (Lindane)	3		4	11	11	4	5					15			53
Heptachlor	3		4	11	11	4	5					5			43
Heptachlor epoxide	3		4	11	11	4	5					15			53
Methoxychlor	3		4	11	11	4	5					5			43
Mirex				11	11							15			37
Oxychlordane				11	11							15			37
Total Chlordanes	3		4	11	11	4	5					15			53
Total Endosulfan	3		4	11	11	4	5					5			43
Total DDD	3		4	11	11	4	5					15			53
Total DDX	3		4	11	11	4	5					15			53
Total DDE	3		4	11	11	4	5					15			53
Total DDT	3		4	11	11	4	5					15			53
Total 4,4'-DDX	3		4	11	11	4	5								38
Toxaphene				11	11										22
trans-Chlordane	3		4	11	11	4	5					15			53
trans-Nonachlor				11	11							15			37

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					whole egg	Bass fillet		
PAHs															
1-Methylnaphthalene	3			4			4	5							16
2-Methylnaphthalene	3			4	11	11	4	5							38
Acenaphthene	3			4	11	11	4	5							38
Acenaphthylene	3			4	11	11	4	5							38
Anthracene	3			4	11	11	4	5							38
Benzo(a)anthracene	3			4	11	11	4	5							38
Benzo(a)pyrene	3			4	11	11	4	5							38
Benzo(b)fluoranthene	3			4	11	11	4	5							38
Benzo(b+k)fluoranthene	3			4			4	5							16
Benzo(e)pyrene															0
Benzo(g,h,i)perylene	3			4	11	11	4	5							38
Benzo(j+k)fluoranthene															0
Benzo(k)fluoranthene	3			4	11	11	4	5							38
C1-Chrysene															0
C1-Dibenzothiophene															0
C1-Fluoranthene/pyrene															0
C1-Fluorene															0
C1-Phenanthrene/anthracene															0
C2-Chrysene															0
C2-Dibenzothiophene															0
C2-Fluoranthene/pyrene															0
C2-Fluorene															0
C2-Naphthalene															0
C2-Phenanthrene/anthracene															0
C3-Chrysene															0
C3-Dibenzothiophene															0
C3-Fluoranthene/pyrene															0
C3-Fluorene															0
C3-Naphthalene															0
C3-Phenanthrene/anthracene															0
C4-Chrysene															0
C4-Naphthalene															0
C4-Phenanthrene/anthracene															0
Chrysene	3			4	11	11	4	5							38
Dibenzo(a,h)anthracene	3			4	11	11	4	5							38
Dibenzothiophene															0
Fluoranthene	3			4	11	11	4	5							38
Fluorene	3			4	11	11	4	5							38
High Molecular Weight PAH	3			4	11	11	4	5							38
Indeno(1,2,3-cd)pyrene	3			4	11	11	4	5							38
Low Molecular Weight PAH	3			4	11	11	4	5							38
Naphthalene	3			4	11	11	4	5							38
Perylene															0

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey whole egg	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total	
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin					whole egg	Bass fillet		
Phenanthrene	3		4	11	11	4	5								38
Pyrene	3		4	11	11	4	5								38
Total cPAHs	3		4	11	11	4	5								38
Total PAHs	3		4	11	11	4	5								38
Phthalates															
Bis(2-ethylhexyl) phthalate				11	11										22
Butylbenzyl phthalate				11	11										22
Dibutyl phthalate				11	11										22
Diethyl phthalate				11	11										22
Dimethyl phthalate				11	11										22
Di-n-octyl phthalate				11	11										22
SVOCs															
1,2,4-Trichlorobenzene	3		4	11	11	4	5								38
1,2-Dichlorobenzene	3		4	11	11	4	5								38
1,2-Diphenylhydrazine				10	10										20
1,3-Dichlorobenzene	3		4	11	11	4	5								38
1,4-Dichlorobenzene	3		4	11	11	4	5								38
2,4-Dinitrotoluene	3		4	11	11	4	5								38
2,6-Dinitrotoluene	3		4	11	11	4	5								38
2-Chloronaphthalene	3		4	11	11	4	5								38
2-Nitroaniline				11	11										22
3,3'-Dichlorobenzidine				11	11										22
3-Nitroaniline				11	11										22
4-Bromophenyl phenyl ether	3		4	11	11	4	5								38
4-Chloroaniline				11	11										22
4-Chlorophenyl phenyl ether	3		4	11	11	4	5								38
4-Nitroaniline				11	11										22
Aniline				11	11										22
Azobenzene				1	1										2
Benzoic acid				11	11										22
Benzyl alcohol				11	11										22
Bis(2-chloro-1-methylethyl) ether															0
Bis(2-chloroethoxy) methane	3		4	11	11	4	5								38
Bis(2-chloroethyl) ether	3		4	11	11	4	5								38
Bis(2-chloroisopropyl) ether	3		4	11	11	4	5								38
Carbazole	3		4	11	11	4	5								38
Dibenzofuran	3		4	11	11	4	5								38
Diphenyl	3		4			4	5								16
Hexabromocyclododecane												15			15
Hexachlorobenzene	3		4	11	11	4	5					15			53
Hexachlorobutadiene	3		4	11	11	4	5					5			43
Hexachlorocyclopentadiene				11	11										22
Hexachloroethane	3		4	11	11	4	5								38
Isophorone				11	11										22

Table 2.3-9b. Summary of Biota Sample Counts in RI Data Set (Non-LWG Data).

	Chinook, adult			Lab clam	<i>Lumbriculus variegatus</i>	Lamprey, adult	Sturgeon, adult	Carp body without fillet	fillet	Clam body without shell	Osprey	Smallmouth Bass body without fillet	Smallmouth Bass fillet	Grand Total
	fillet	fillet without skin	whole body	body without shell	whole body	whole body	fillet without skin			whole egg				
Nitrobenzene				11	11									22
N-Nitrosodimethylamine				11	11									22
N-Nitrosodiphenylamine	3		4	11	11	4	5							38
N-Nitrosodipropylamine				11	11									22
Octachlorostyrene										15				15
Retene	3		4			4	5							16
Phenols														
2,3,4,5-Tetrachlorophenol				11	11									22
2,3,4,6-Tetrachlorophenol				11	11									22
2,3,5,6-Tetrachlorophenol				11	11									22
2,4,5-Trichlorophenol	2		4	11	11	2	5							35
2,4,6-Trichlorophenol	2		4	11	11	2	5							35
2,4-Dichlorophenol	2		4	11	11	2	5							35
2,4-Dimethylphenol	2		4	11	11	3	5							36
2,4-Dinitrophenol				11	11									22
2-Chlorophenol	2		4	11	11	2	5							35
2-Methylphenol				11	11									22
2-Nitrophenol	2		4	11	11	2	5							35
4,6-Dinitro-2-methylphenol				11	11									22
4-Chloro-3-methylphenol				11	11									22
4-Methylphenol				11	11									22
4-Nitrophenol				11	11									22
Pentachlorophenol				11	11									22
Phenol	2		4	11	11	2	5							35
VOCs														
1,2,3,4-Tetrachlorobenzene										15				15
1,2,4,5-Tetrachlorobenzene										15				15
Pentachlorobenzene										15				15
Grand Total	1,052	723	1,416	2,189	2,189	1,397	1,744	72	72	63	3,040	144	144	14,245

Notes:

LWG - Lower Willamette Group

PAH - polycyclic aromatic hydrocarbon

PBDE - polybrominated diphenyl ether

PCB - polychlorinated biphenyl

PCDD/F - dioxin/furan

SVOC - semivolatile organic compound

Total TCDD TEQ - sum of PCDD/F and PCB congener TCDD TEQ

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Black crappie	Fillet	LWG01FZ0306TSBCFLC10	5
Black crappie	Fillet	LWG01FZ0306TSBCFLC20	5
Black crappie	Fillet	LWG01FZ0609TSBCFLC10	5
Black crappie	Fillet	LWG01FZ0609TSBCFLC20	5
Black crappie	Fillet without skin	LWG01FZ0306TSBCFSC10	5
Black crappie	Fillet without skin	LWG01FZ0306TSBCFSC20	5
Black crappie	Fillet without skin	LWG01FZ0609TSBCFSC10	5
Black crappie	Fillet without skin	LWG01FZ0609TSBCFSC20	5
Black crappie	Whole body	LWG01FZ0306TSBCWBC10	5
Black crappie	Whole body	LWG01FZ0306TSBCWBC20	5
Black crappie	Whole body	LWG01FZ0609TSBCWBC10	5
Black crappie	Whole body	LWG01FZ0609TSBCWBC20	5
Brown bullhead	Fillet without skin	LWG01FZ0306TSBBFLC10	5
Brown bullhead	Fillet without skin	LWG01FZ0306TSBBFLC20	5
Brown bullhead	Fillet without skin	LWG01FZ0306TSBBFLC30	5
Brown bullhead	Fillet without skin	LWG01FZ0306TSBBFSC10	5
Brown bullhead	Fillet without skin	LWG01FZ0306TSBBFSC20	5
Brown bullhead	Fillet without skin	LWG01FZ0306TSBBFSC30	5
Brown bullhead	Fillet without skin	LWG01FZ0609TSBBFLC10	5
Brown bullhead	Fillet without skin	LWG01FZ0609TSBBFLC20	5
Brown bullhead	Fillet without skin	LWG01FZ0609TSBBFLC30	5
Brown bullhead	Fillet without skin	LWG01FZ0609TSBBFSC10	5
Brown bullhead	Fillet without skin	LWG01FZ0609TSBBFSC20	5
Brown bullhead	Fillet without skin	LWG01FZ0609TSBBFSC30	5
Brown bullhead	Whole body	LWG0120R001TSBBWBC10	5
Brown bullhead	Whole body	LWG0120R001TSBBWBC20	5
Brown bullhead	Whole body	LWG0128R001TSBBWBC00	5
Brown bullhead	Whole body	LWG01FZ0306TSBBWBC10	5
Brown bullhead	Whole body	LWG01FZ0306TSBBWBC20	5
Brown bullhead	Whole body	LWG01FZ0306TSBBWBC30	5
Brown bullhead	Whole body	LWG01FZ0609TSBBWBC10	5
Brown bullhead	Whole body	LWG01FZ0609TSBBWBC20	5
Brown bullhead	Whole body	LWG01FZ0609TSBBWBC30	5
Carp	Body without fillet	LW3-CP0004-C10B	5
Carp	Body without fillet	LW3-CP0004-C20B	5
Carp	Body without fillet	LW3-CP0004-C30B	5
Carp	Body without fillet	LW3-CP0408-C10B	5
Carp	Body without fillet	LW3-CP0408-C20B	5
Carp	Body without fillet	LW3-CP0408-C30B	5
Carp	Body without fillet	LW3-CP0812-C11B	5
Carp	Body without fillet	LW3-CP0812-C20B	5
Carp	Body without fillet	LW3-CP0812-C30B	5
Carp	Fillet	LW3-CP0004-C10F	5
Carp	Fillet	LW3-CP0004-C20F	5
Carp	Fillet	LW3-CP0004-C30F	5
Carp	Fillet	LW3-CP0408-C10F	5
Carp	Fillet	LW3-CP0408-C20F	5
Carp	Fillet	LW3-CP0408-C30F	5
Carp	Fillet	LW3-CP0812-C11F	5
Carp	Fillet	LW3-CP0812-C20F	5
Carp	Fillet	LW3-CP0812-C30F	5
Carp	Fillet	LWG01FZ0306TSCPFLC10	5
Carp	Fillet	LWG01FZ0306TSCPFLC20	5
Carp	Fillet	LWG01FZ0306TSCPFLC30	5
Carp	Fillet	LWG01FZ0609TSCPFLC10	5
Carp	Fillet	LWG01FZ0609TSCPFLC20	5
Carp	Fillet	LWG01FZ0609TSCPFLC30	5
Carp	Fillet without skin	LWG01FZ0306TSCPFLC10	5
Carp	Fillet without skin	LWG01FZ0306TSCPFLC20	5
Carp	Fillet without skin	LWG01FZ0306TSCPFLC30	5
Carp	Fillet without skin	LWG01FZ0609TSCPFLC10	5
Carp	Fillet without skin	LWG01FZ0609TSCPFLC20	5
Carp	Fillet without skin	LWG01FZ0609TSCPFLC30	5
Carp	Fillet without skin	LWG01FZ0609TSCPFLC10	5
Carp	Fillet without skin	LWG01FZ0609TSCPFLC20	5
Carp	Fillet without skin	LWG01FZ0609TSCPFLC30	5

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Carp	Fillet without skin	LWG01FZ0609TSCPFC30	5
Carp	Whole body	LWG01FZ0306TSCPWBC10	5
Carp	Whole body	LWG01FZ0306TSCPWBC20	5
Carp	Whole body	LWG01FZ0306TSCPWBC30	5
Carp	Whole body	LWG01FZ0609TSCPWBC10	5
Carp	Whole body	LWG01FZ0609TSCPWBC20	5
Carp	Whole body	LWG01FZ0609TSCPWBC30	5
Carp	Whole body	LWG1AFZ0609TSCPWB	1
Chinook, adult	Fillet	WLTASE03CFH03254200	3
Chinook, adult	Fillet	WLTASE03CFH03254201	3
Chinook, adult	Fillet	WLTASE03CFH03254202	3
Chinook, adult	Fillet without skin	WLTASE03CFH03254210	3
Chinook, adult	Fillet without skin	WLTASE03CFH03254211	3
Chinook, adult	Fillet without skin	WLTASE03CFH03254212	3
Chinook, adult	Whole body	WLTASE03CFH03254220	3
Chinook, adult	Whole body	WLTASE03CFH03254221	3
Chinook, adult	Whole body	WLTASE03CFH03254222	3
Chinook, adult	Whole body	WLTASE03CFH03254223	3
Chinook, juvenile	Stomach contents	LW2-T01 SC	90
Chinook, juvenile	Stomach contents	LW2-T01-NOAA SC	40
Chinook, juvenile	Stomach contents	LW2-T02 SC	90
Chinook, juvenile	Stomach contents	LW2-T02-NOAA SC	42
Chinook, juvenile	Stomach contents	LW2-T03 SC	72
Chinook, juvenile	Stomach contents	LW2-T04 SC	90
Chinook, juvenile	Whole body	LW2-T01-REP1	30
Chinook, juvenile	Whole body	LW2-T01-REP2	30
Chinook, juvenile	Whole body	LW2-T01-REP3	30
Chinook, juvenile	Whole body	LW2-T02-REP1	30
Chinook, juvenile	Whole body	LW2-T02-REP2	30
Chinook, juvenile	Whole body	LW2-T02-REP3	30
Chinook, juvenile	Whole body	LW2-T03-REP1	24
Chinook, juvenile	Whole body	LW2-T03-REP2	21
Chinook, juvenile	Whole body	LW2-T03-REP3	27
Chinook, juvenile	Whole body	LW2-T04-REP1	30
Chinook, juvenile	Whole body	LW2-T04-REP2	30
Chinook, juvenile	Whole body	LW2-T04-REP3	30
Chinook, juvenile	Whole body	LWG1A02R102TSSCWBC00	15
Chinook, juvenile	Whole body	LWG1A02R112TSSCWBC00	14
Chinook, juvenile	Whole body	LWG1A02R113TSSCWBC00	15
Chinook, juvenile	Whole body	LWG1A03R118TSSCWBC00	11
Chinook, juvenile	Whole body	LWG1A03R125TSSCWBC00	13
Chinook, juvenile	Whole body	LWG1A04R126TSSCWBC00	12
Chinook, juvenile	Whole body	LWG1A26R111TSSCWBC00	12
Clam	Body without shell	LW2-BTFC001	106
Clam	Body without shell	LW2-BTFC002	96
Clam	Body without shell	LW2-BTFC003	71
Clam	Body without shell	LW2-BTFC004	102
Clam	Body without shell	LW2-BTFC005	56
Clam	Body without shell	LW2-BTFC006 Rep 1	171
Clam	Body without shell	LW2-BTFC006 Rep 2	171
Clam	Body without shell	LW2-BTFC007	39
Clam	Body without shell	LW2-BTFC008	62
Clam	Body without shell	LW2-BTFC009	63
Clam	Body without shell	LW2-BTFC010	108
Clam	Body without shell	LW2-BTFC011	32
Clam	Body without shell	LW2-BTFC012	50
Clam	Body without shell	LW2-BTFC013	89
Clam	Body without shell	LW2-BTFC014	36
Clam	Body without shell	LW2-BTFC015	32
Clam	Body without shell	LW2-BTFC016	34
Clam	Body without shell	LW2-BTFC017	37
Clam	Body without shell	LW2-BTFC018	16

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Clam	Body without shell	LW2-BTFC019	41
Clam	Body without shell	LW2-BTFC020	52
Clam	Body without shell	LW2-BTFC021	37
Clam	Body without shell	LW2-BTFC022	49
Clam	Body without shell	LW2-BTFC023	35
Clam	Body without shell	LW2-BTFC024	110
Clam	Body without shell	LW2-BTFC025	22
Clam	Body without shell	LW2-BTFC026	50
Clam	Body without shell	LW2-BTFC027 Rep 1	75
Clam	Body without shell	LW2-BTFC027 Rep 2	75
Clam	Body without shell	LW2-BTFC028	42
Clam	Body without shell	LW2-BTFC029	10
Clam	Body without shell	LW2-BTFC030	69
Clam	Body without shell	LW2-BTFC031	41
Clam	Body without shell	LW2-BTFC032	5
Clam	Body without shell	LW2-BTFC033	14
Clam	Body without shell	LW3-CA01E-C01	15
Clam	Body without shell	LW3-CA02W-C00	14
Clam	Body without shell	LW3-CA03W-C00	Unknown
Clam	Body without shell	LW3-CA04W-C00	Unknown
Clam	Body without shell	LW3-CA05E-C00	14
Clam	Body without shell	LW3-CA05W-C00	Unknown
Clam	Body without shell	LW3-CA10W-C00	15
Clam	Body without shell	LW3-CA11E-C00	10
Clam	Body without shell	LW3-CA12E-C00	11
Clam	Body without shell	LW3-CA12W-C00	Unknown
Clam	Body without shell	LWG0106R002TSCAWBC00	Unknown
Clam	Body without shell	LWG0107R003TSCAWBC00	Unknown
Clam	Body without shell	LWG0107R006TSCAWBC00	Unknown
Clam	Depurated w/o shell	LW3-CA01E-C00D	Unknown
Clam	Depurated w/o shell	LW3-CA02W-C00D	Unknown
Clam	Depurated w/o shell	LW3-CA10W-C00D	Unknown
Clam	Depurated w/o shell	LW3-CA11E-C00D	Unknown
Clam	Depurated w/o shell	LW3-CA12E-C00D	Unknown
Crayfish	Whole body	LW3-CR01E-Alt-C00	7
Crayfish	Whole body	LW3-CR01W-C00	8
Crayfish	Whole body	LW3-CR05W-C00	6
Crayfish	Whole body	LW3-CR06W-C00	7
Crayfish	Whole body	LW3-CR08W-C00	10
Crayfish	Whole body	LW3-CR10W-C00	9
Crayfish	Whole body	LW3-CR11E-C01	8
Crayfish	Whole body	LW3-CR12E-C00	8
Crayfish	Whole body	LW3-CR12W-C00	9
Crayfish	Whole body	LWG0102R001TSCRWBC00	8
Crayfish	Whole body	LWG0102R015TSCRWBC00	8
Crayfish	Whole body	LWG0103R001TSCRWBC00	8
Crayfish	Whole body	LWG0103R002TSCRWBC00	9
Crayfish	Whole body	LWG0103R003TSCRWBC00	8
Crayfish	Whole body	LWG0103R004TSCRWBC00	8
Crayfish	Whole body	LWG0103R005TSCRWBC00	9
Crayfish	Whole body	LWG0103R032TSCRWBC00	9
Crayfish	Whole body	LWG0104R002TSCRWBC00	9
Crayfish	Whole body	LWG0104R003TSCRWBC00	8
Crayfish	Whole body	LWG0104R004TSCRWBC10	9
Crayfish	Whole body	LWG0104R004TSCRWBC20	10
Crayfish	Whole body	LWG0105R001TSCRWBC00	8
Crayfish	Whole body	LWG0105R003TSCRWBC00	8
Crayfish	Whole body	LWG0106R001TSCRWBC00	11
Crayfish	Whole body	LWG0106R004TSCRWBC10	9
Crayfish	Whole body	LWG0106R004TSCRWBC20	8
Crayfish	Whole body	LWG0106R031TSCRWBC00	8
Crayfish	Whole body	LWG0107R003TSCRWBC00	9

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Crayfish	Whole body	LWG0107R004TSCRWBC00	9
Crayfish	Whole body	LWG0107R006TSCRWBC00	8
Crayfish	Whole body	LWG0108R001TSCRWBC00	9
Crayfish	Whole body	LWG0108R002TSCRWBC00	9
Crayfish	Whole body	LWG0108R003TSCRWBC00	8
Crayfish	Whole body	LWG0109R001TSCRWBC10	8
Crayfish	Whole body	LWG0109R001TSCRWBC20	9
Crayfish	Whole body	LWG0109R002TSCRWBC00	8
Lab clam	Body without shell	LW2-BTLC001	183
Lab clam	Body without shell	LW2-BTLC002	183
Lab clam	Body without shell	LW2-BTLC003	183
Lab clam	Body without shell	LW2-BTLC004	183
Lab clam	Body without shell	LW2-BTLC005	183
Lab clam	Body without shell	LW2-BTLC006-1	183
Lab clam	Body without shell	LW2-BTLC006-2	183
Lab clam	Body without shell	LW2-BTLC007	177
Lab clam	Body without shell	LW2-BTLC008	177
Lab clam	Body without shell	LW2-BTLC009	183
Lab clam	Body without shell	LW2-BTLC010	183
Lab clam	Body without shell	LW2-BTLC011	183
Lab clam	Body without shell	LW2-BTLC012	183
Lab clam	Body without shell	LW2-BTLC013	177
Lab clam	Body without shell	LW2-BTLC014	183
Lab clam	Body without shell	LW2-BTLC015	183
Lab clam	Body without shell	LW2-BTLC016	183
Lab clam	Body without shell	LW2-BTLC017	177
Lab clam	Body without shell	LW2-BTLC018	183
Lab clam	Body without shell	LW2-BTLC019	183
Lab clam	Body without shell	LW2-BTLC020	177
Lab clam	Body without shell	LW2-BTLC021	177
Lab clam	Body without shell	LW2-BTLC022	177
Lab clam	Body without shell	LW2-BTLC023	183
Lab clam	Body without shell	LW2-BTLC024	177
Lab clam	Body without shell	LW2-BTLC025	177
Lab clam	Body without shell	LW2-BTLC026	177
Lab clam	Body without shell	LW2-BTLC027-1	177
Lab clam	Body without shell	LW2-BTLC027-2	177
Lab clam	Body without shell	LW2-BTLC028	177
Lab clam	Body without shell	LW2-BTLC029	177
Lab clam	Body without shell	LW2-BTLC030	177
Lab clam	Body without shell	LW2-BTLC031	177
Lab clam	Body without shell	LW2-BTLC032	177
Lab clam	Body without shell	LW2-BTLC033	183
Lab clam	Body without shell	LW2-BTLCCTRL 011906	177
Lab clam	Body without shell	LW2-BTLCCTRL 022406	183
Lab clam	Body without shell	LW2-BTLCTZ 012706	183
Lab clam	Body without shell	LW2-BTLCTZ 122205	177
Lab clam	Body without shell	WLCDRD050178G	Unknown
Lab clam	Body without shell	WLCDRD050184G	Unknown
Lab clam	Body without shell	WLCDRD05CtrlCf	Unknown
Lab clam	Body without shell	WLCDRD05Day0Cf	Unknown
Lab clam	Body without shell	WLCDRD05WRVC011Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC028Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC029Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC043Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC046Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC057Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC066Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC072Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC108Clam	Unknown
Lab clam	Body without shell	WLCDRD05WRVC118Clam	Unknown
Lamprey, adult	Whole body	WLTASE03WF03214300	30

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Lamprey, adult	Whole body	WLTASE03WF03214301	30
Lamprey, adult	Whole body	WLTASE03WF03214302	30
Lamprey, adult	Whole body	WLTASE03WF03214303	30
Lamprey, ammonocoetes	Whole body	LW2-BTFLamp Comp	10
Lamprey, ammonocoetes	Whole body	LW3-LTA-Comp1	7
Lamprey, ammonocoetes	Whole body	LW3-LTA-Comp2	28
Lamprey, ammonocoetes	Whole body	LW3-LTA-Comp3	19
Lamprey, ammonocoetes	Whole body	LW3-LTA-Comp4	49
Lamprey, ammonocoetes	Whole body	LW3-LTA-Comp5-1	44
Lamprey, ammonocoetes	Whole body	LW3-LTA-Comp5-2	44
Lamprey, macropthalmia	Whole body	LW3-LTM-Comp1	6
Lamprey, macropthalmia	Whole body	LW3-LTM-Comp2	6
Lamprey, macropthalmia	Whole body	LW3-LTM-Comp3	9
Largescale sucker	Whole body	LWG0103R014TSLSWBC10	5
Largescale sucker	Whole body	LWG0103R014TSLSWBC20	4
Largescale sucker	Whole body	LWG0105R006TSLSWBC00	4
Largescale sucker	Whole body	LWG0107R009TSLSWBC00	6
Largescale sucker	Whole body	LWG0108R010TSLSWBC00	6
Largescale sucker	Whole body	LWG0109R006TSLSWBC00	6
Largescale sucker	Whole body	LWG01FZ0306TSLSWBC10	1
Largescale sucker	Whole body	LWG01FZ0306TSLSWBC20	2
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW001	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW002	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW003	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW004	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW005	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW006-1	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW006-2	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW007	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW008	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW009	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW010	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW011	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW012	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW013	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW014	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW015	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW016	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW017	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW018	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW019	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW020	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW021	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW022	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW023	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW024	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW025	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW026	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW027-1	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW027-2	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW028	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW029	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW030	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW031	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW032	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLW033	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLWCTRL 011106	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLWCTRL 030106	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLWTZ 020106	Unknown
<i>Lumbriculus variegatus</i>	Whole body	LW2-BTLWTZ 121405	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD050176G	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD050187G	Unknown

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05CtrlLv	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05Day0Lv	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC011Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC028Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC029Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC043Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC046Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC057Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC066Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC072Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC108Worm	Unknown
<i>Lumbriculus variegatus</i>	Whole body	WLCDRD05WRVC118Worm	Unknown
Multiplate invertebrates	Whole body	LW2-MIT001	Unknown
Multiplate invertebrates	Whole body	LW2-MIT002	Unknown
Multiplate invertebrates	Whole body	LW2-MIT003/005/006	Unknown
Multiplate invertebrates	Whole body	LW2-MIT004	Unknown
Multiplate invertebrates	Whole body	LW2-MIT007	Unknown
Multiplate invertebrates	Whole body	LW2-MIT008/010	Unknown
Multiplate invertebrates	Whole body	LW2-MIT009	Unknown
Northern pikeminnow	Whole body	LWG0103R014TSNPWBC10	5
Northern pikeminnow	Whole body	LWG0103R014TSNPWBC20	5
Northern pikeminnow	Whole body	LWG0105R006TSNPWBC00	5
Northern pikeminnow	Whole body	LWG0107R009TSNPWBC00	5
Northern pikeminnow	Whole body	LWG0108R010TSNPWBC00	3
Northern pikeminnow	Whole body	LWG0109R006TSNPWBC00	4
Osprey	whole egg	WLRASE08MC-10B	1
Osprey	whole egg	WLRASE08MC-1B	1
Osprey	whole egg	WLRASE08MC-20	1
Osprey	whole egg	WLRASE08MC-2B	1
Osprey	whole egg	WLRASE08MC-9	1
Osprey	whole egg	WLRASE08W11	1
Osprey	whole egg	WLRASE08W23	1
Osprey	whole egg	WLRASE08W28	1
Osprey	whole egg	WLRASE08W30B	1
Osprey	whole egg	WLRASE08W30C	1
Osprey	whole egg	WLRASE08W32	1
Osprey	whole egg	WLRASE08W3B	1
Osprey	whole egg	WLRASE08W6	1
Osprey	whole egg	WLRASE08W7A	1
Osprey	whole egg	WLRASE08W9B	1
Pearmouth	Whole body	LWG0103R014TSPMWBC00	5
Pearmouth	Whole body	LWG0105R006TSPMWBC00	5
Pearmouth	Whole body	LWG0107R009TSPMWBC00	4
Pearmouth	Whole body	LWG0108R010TSPMWBC00	5
Pearmouth	Whole body	LWG0109R006TSPMWBC00	5
Sculpin	Whole body	LW3-SP01E-C00	8
Sculpin	Whole body	LW3-SP01W-C00	12
Sculpin	Whole body	LW3-SP03E-C00	7
Sculpin	Whole body	LW3-SP04W-C00	9
Sculpin	Whole body	LW3-SP05E-C00	10
Sculpin	Whole body	LW3-SP06W-C00	20
Sculpin	Whole body	LW3-SP07E-C00	11
Sculpin	Whole body	LW3-SP07W-C00	10
Sculpin	Whole body	LW3-SP08E-C00	20
Sculpin	Whole body	LW3-SP08W-C00	10
Sculpin	Whole body	LW3-SP09W-C00	10
Sculpin	Whole body	LW3-SP10E-C00	11
Sculpin	Whole body	LW3-SP10W-C00	8
Sculpin	Whole body	LW3-SP11E-C00	12
Sculpin	Whole body	LW3-SP12E-C00	10
Sculpin	Whole body	LW3-SP12W-ALT-C01	32
Sculpin	Whole body	LWG0102R001TSSPWBC00	12

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Sculpin	Whole body	LWG0102R001TSSPWBC10	12
Sculpin	Whole body	LWG0102R015TSSPWBC00	17
Sculpin	Whole body	LWG0103R001TSSPWBC00	17
Sculpin	Whole body	LWG0103R002TSSPWBC10	21
Sculpin	Whole body	LWG0103R002TSSPWBC20	18
Sculpin	Whole body	LWG0103R004TSSPWBC10	19
Sculpin	Whole body	LWG0103R004TSSPWBC20	20
Sculpin	Whole body	LWG0103R005TSSPWBC00	13
Sculpin	Whole body	LWG0103R032TSSPWBC00	24
Sculpin	Whole body	LWG0103R034TSSPWBC00	19
Sculpin	Whole body	LWG0104R002TSSPWBC00	22
Sculpin	Whole body	LWG0104R003TSSPWBC00	20
Sculpin	Whole body	LWG0104R004TSSPWBC00	18
Sculpin	Whole body	LWG0105R001TSSPWBC00	21
Sculpin	Whole body	LWG0105R020TSSPWBC00	23
Sculpin	Whole body	LWG0106R001TSSPWBC00	17
Sculpin	Whole body	LWG0106R002TSSPWBC10	19
Sculpin	Whole body	LWG0106R002TSSPWBC20	19
Sculpin	Whole body	LWG0106R004TSSPWBC00	22
Sculpin	Whole body	LWG0107R003TSSPWBC00	16
Sculpin	Whole body	LWG0107R006TSSPWBC00	15
Sculpin	Whole body	LWG0108R001TSSPWBC00	19
Sculpin	Whole body	LWG0108R002TSSPWBC00	21
Sculpin	Whole body	LWG0108R003TSSPWBC00	18
Sculpin	Whole body	LWG0109R001TSSPWBC00	20
Sculpin	Whole body	LWG0109R002TSSPWBC00	19
Smallmouth bass	Body without fillet	LW3-SB010E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB010W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB011E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB011W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB02E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB03E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB03W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB04E-C01B	5
Smallmouth bass	Body without fillet	LW3-SB04W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB05W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB06E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB06W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB07E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB07W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB08E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB08W-C00B	5
Smallmouth bass	Body without fillet	LW3-SB09E-C00B	5
Smallmouth bass	Body without fillet	LW3-SB09W-C00B	5
Smallmouth bass	Fillet	LW3-SB010E-C00F	5
Smallmouth bass	Fillet	LW3-SB010W-C00F	5
Smallmouth bass	Fillet	LW3-SB011E-C00F	5
Smallmouth bass	Fillet	LW3-SB011W-C00F	5
Smallmouth bass	Fillet	LW3-SB02E-C00F	5
Smallmouth bass	Fillet	LW3-SB03E-C00F	5
Smallmouth bass	Fillet	LW3-SB03W-C00F	5
Smallmouth bass	Fillet	LW3-SB04E-C01F	5
Smallmouth bass	Fillet	LW3-SB04W-C00F	5
Smallmouth bass	Fillet	LW3-SB05W-C00F	5
Smallmouth bass	Fillet	LW3-SB06E-C00F	5
Smallmouth bass	Fillet	LW3-SB06W-C00F	5
Smallmouth bass	Fillet	LW3-SB07E-C00F	5
Smallmouth bass	Fillet	LW3-SB07W-C00F	5
Smallmouth bass	Fillet	LW3-SB08E-C00F	5
Smallmouth bass	Fillet	LW3-SB08W-C00F	5
Smallmouth bass	Fillet	LW3-SB09E-C00F	5
Smallmouth bass	Fillet	LW3-SB09W-C00F	5

Table 2.3-10. Number of Individual Fish or Invertebrates per Sample in the RI Data Set.

Species	Tissue	Sample	Number of Individuals per Composite
Smallmouth bass	Fillet	LWG0103R014TSSBFLC00	5
Smallmouth bass	Fillet	LWG0105R006TSSBFLC00	5
Smallmouth bass	Fillet	LWG0106R024TSSBFLC00	3
Smallmouth bass	Fillet	LWG0108R032TSSBFLC00	5
Smallmouth bass	Fillet	LWG0109R006TSSBFLC00	5
Smallmouth bass	Fillet without skin	LWG0103R014TSSBFSC00	5
Smallmouth bass	Fillet without skin	LWG0105R006TSSBFSC00	5
Smallmouth bass	Fillet without skin	LWG0106R024TSSBFSC00	3
Smallmouth bass	Fillet without skin	LWG0108R032TSSBFSC00	5
Smallmouth bass	Fillet without skin	LWG0109R006TSSBFSC00	5
Smallmouth bass	Whole body	LWG0103R014TSSBWBC00	5
Smallmouth bass	Whole body	LWG0104R023TSSBWBC10	5
Smallmouth bass	Whole body	LWG0104R023TSSBWBC20	5
Smallmouth bass	Whole body	LWG0104R023TSSBWBC30	5
Smallmouth bass	Whole body	LWG0105R006TSSBWBC00	5
Smallmouth bass	Whole body	LWG0106R024TSSBWBC00	1
Smallmouth bass	Whole body	LWG0107R009TSSBWBC10	5
Smallmouth bass	Whole body	LWG0107R009TSSBWBC20	5
Smallmouth bass	Whole body	LWG0107R009TSSBWBC30	5
Smallmouth bass	Whole body	LWG0108R010TSSBWBC10	4
Smallmouth bass	Whole body	LWG0108R010TSSBWBC20	5
Smallmouth bass	Whole body	LWG0108R010TSSBWBC30	5
Smallmouth bass	Whole body	LWG0108R032TSSBWBC00	5
Smallmouth bass	Whole body	LWG0109R006TSSBWBC00	2
Smallmouth bass	Whole body	LWG0120R001TSSBWBC10	5
Smallmouth bass	Whole body	LWG0120R001TSSBWBC20	5
Smallmouth bass	Whole body	LWG0120R001TSSBWBC30	5
Smallmouth bass	Whole body	LWG0128R001TSSBWBC10	5
Smallmouth bass	Whole body	LWG0128R001TSSBWBC20	5
Smallmouth bass	Whole body	LWG0128R001TSSBWBC30	5
Sturgeon (adult)	Fillet without skin	WLTASE03ISA03334750	1
Sturgeon (adult)	Fillet without skin	WLTASE03ISA03334751	1
Sturgeon (adult)	Fillet without skin	WLTASE03ISA03354100	1
Sturgeon (adult)	Fillet without skin	WLTASE03ISA03354101	1
Sturgeon (adult)	Fillet without skin	WLTASE03ISA03354102	1
Sturgeon (juvenile)	Stomach contents	LW3-SG001005-COMP	2
Sturgeon (juvenile)	Stomach contents	LW3-SG003-01	1
Sturgeon (juvenile)	Stomach contents	LW3-SG004-01	1
Sturgeon (juvenile)	Whole body	LW3-STWB001-01	1
Sturgeon (juvenile)	Whole body	LW3-STWB001-02	1
Sturgeon (juvenile)	Whole body	LW3-STWB001-03	1
Sturgeon (juvenile)	Whole body	LW3-STWB002-01	1
Sturgeon (juvenile)	Whole body	LW3-STWB002-02	1
Sturgeon (juvenile)	Whole body	LW3-STWB002-03	1
Sturgeon (juvenile)	Whole body	LW3-STWB003-01	1
Sturgeon (juvenile)	Whole body	LW3-STWB003-02	1
Sturgeon (juvenile)	Whole body	LW3-STWB003-03	1
Sturgeon (juvenile)	Whole body	LW3-STWB004-01	1
Sturgeon (juvenile)	Whole body	LW3-STWB004-02	1
Sturgeon (juvenile)	Whole body	LW3-STWB004-03	1
Sturgeon (juvenile)	Whole body	LW3-STWB005-01	1
Sturgeon (juvenile)	Whole body	LW3-STWB005-02	1
Sturgeon (juvenile)	Whole body	LW3-STWB005-03	1